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Manchester in 1915

being the Handbook for the Eighty-fifth Meeting of the British Association for the Advancement of Science held in Manchester September seven to ten

:: 1915 ::

With an Appendix containing the Programme of the Meeting

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UNIVERSITY OF TORONTO

MANCHESTER:
AT THE UNIVERSITY PRESS
12, LIME GROVE, OXFORD ROAD

LONGMANS, GREEN & CO.
London, New York, Bombay, etc.

1915

Manchester in 1915

Published by the University of Manchester at
THE UNIVERSITY PRESS (H. M. McKECHNIE, Secretary)
12, LIME GROVE, OXFORD ROAD, MANCHESTER

LONGMANS, GREEN & CO.
LONDON : 39, Paternoster Row
NEW YORK : 443-449, Fourth Avenue and Thirtieth Street
BOMBAY : 8, Hornby Road
CALCUTTA : 303, Bowbazar Street
MADRAS : 167, Mount Road

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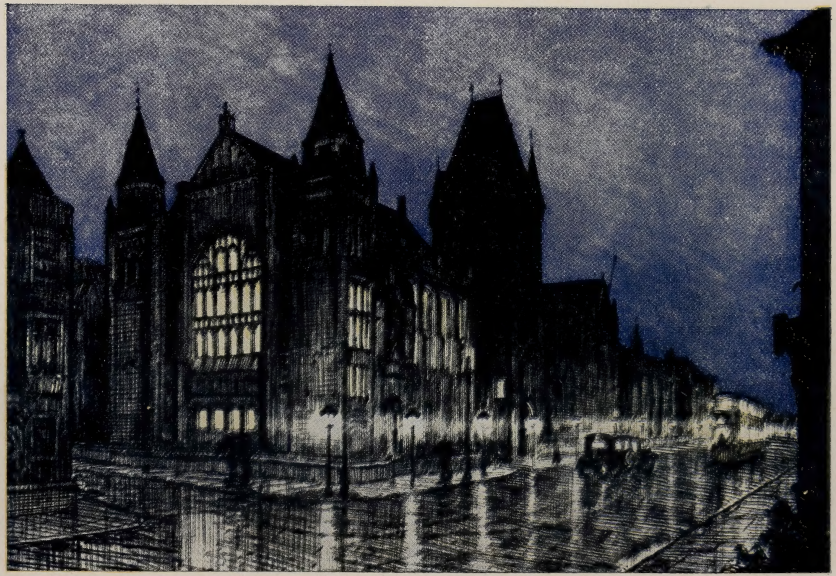

An Impression. PLATE 1. H. G. S. Delépine.

THE UNIVERSITY.

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Edited by

H. M. McKECHNIE

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Preface.

WHEN in July of 1914 the Handbook for this year's meeting of the British Association was first projected, the Committee responsible for its production were unanimously of opinion that an attempt be made to produce a volume on a less pretentious scale than had characterised previous issues. It was felt that these had more or less defeated their aims, as being so weighty and cumbersome, it was impossible to carry and consult them at fitting times. The coming of the War and the curtailment of the excursions and entertainments usually associated with the meeting, found a corresponding lowering of ideals regarding the Handbook, and it was decided to issue a mere local programme containing short notices of these institutions which were peculiarly Manchester. So generous however, were the various people invited to contribute articles, the volume assumed proportions considerably larger than was contemplated, but as so much that was sent in was marked by such qualities of distinction, it was felt it would be as unfair to the authors as to Manchester to make any deletions.

In a volume consisting of a number of essays by different authors on subjects varied but still closely allied, repetitions are more or less unavoidable. An attempt has been made to obviate these as far as possible, but to have removed all would have meant a re-arrangement and re-casting of the whole book, which shortness of time has not permitted.

The book is now offered in the hope that it will prove of use and interest not only to the visitor, but also to the resident, who may find in the pages some things about Manchester that he did not know before.

In the preparation of the book I have received much assistance from Professor Tout who has not only been good enough to read the proofs, but has given most helpful advice; from Professor Tait who has been invaluable in revising the articles dealing with the early history; from Professor Hickson who has

supplied the official information, and from Mr. C. W. Gamble who, previous to his joining the Royal Naval Air Service at the beginning of June, helped to edit the book and did much to see it through the press.

For the use of the illustrations I am indebted to the following:—to Professor Sheridan Delépine for the charming sketch of the University by his son the late Lieutenant Delépine; to the University Press for the map of "The Manor of Manchester" from Professor Tait's *Mediaeval Manchester* and "The Plan of Manchester and Salford in 1650" from Mr. Ernest Broxap's *Great Civil War in Lancashire;* to Mr. J. J. Phelps for the photographs which illustrate his article on the "Bridgewater Canal;" to the University authorities for the "Plan of Manchester," the "Plan of the University" and the drawing of "The Old Owens College;" to the House Governor of the Chetham Hospital, and the Librarian of the Rylands Library for the photographs of their buildings; and to the Photography and Printing Department of the School of Technology for the blocks of the School and the Town Hall frescoes.

H. M. McKECHNIE.

THE UNIVERSITY,
MANCHESTER,
7th August, 1915.

PLATE 2.

THE MANOR OF MANCHESTER AND ITS MEMBERS, &c., IN 1320.

A Brief Historical Sketch of Manchester

AS a town of more than local importance Manchester is a creation of the last two centuries, her incorporation as a borough goes no further back than 1838, the see dates only from 1847, the university (as a college) from 1851, and the port from 1894. Her greatest sons, native and adopted, Dalton and Joule, de Quincey and Mrs. Gaskell, Cobden, Whitworth, belong to the same recent epoch. In the sphere of political and economic ideas, Free Trade, and the other characteristic doctrines of the "Manchester School" are things of yesterday.

Manchester, however, is far from being a mere creation of modern industry. The beginnings of her staple trade itself can be traced back into the thirteenth century, and the place is one of the oldest inhabited spots in the country. Its name, half Celtic, half Latin Anglicised, carries us back to the Roman fort (*chester*) at the confluence of the Irwell and the Medlock which guarded the most important point on the great military road between their two northern fortresses, Chester and York. The huge railway viaducts that bestride its site (at the southern end of Deansgate) attest the skill with which the Roman engineer chose his position. A single shapeless fragment of the eastern wall of the fort under a railway arch is all that remains above ground and the site has unfortunately never been completely excavated, but an interesting collection of objects found on it at various times is housed at Queen's Park, awaiting with patience the provision of a permanent home in the centre of the city

For five centuries after the departure of the Romans, Manchester has no written history. But the natural advantages of the site could not escape the English

invaders as soon as the district in which it lay was annexed to the kingdom of Northumbria and the diocese of York. A settlement was made a mile north of the deserted Roman fort, on a cliff of red sandstone, at the meeting of Irk and Irwell which formed the nucleus of the mediæval town. Here the Irwell was fordable by the Sal*ford*. An archaic inscribed stone seems to prove the existence of an important church at the southern end of this site as early as the ninth century. It became the chief church of south-east Lancashire, with a parish of more than sixty square miles, and the centre of a great rural deanery. The pre-Norman building must have been of considerable size for it was not rebuilt until the thirteenth century.

Meanwhile, Northumbria had been conquered by the Danes, who left traces of their influence in the names of Manchester streets, such as Deans*gate* and of neighbouring hamlets like *Hulme*. The first recorded event in the history of English Manchester is the expulsion of the Danes, in 923, by a Mercian force sent by Edward the Elder, which repaired and garrisoned the old Roman fort. The whole district between the Mersey and the Ribble was wrested from Danish Northumbria and the diocese of York, and was reorganised as a royal frontier domain within the Mercian diocese of Lichfield. Salford became a great royal manor, and the centre of the civil administration of the south-eastern part of the district, but Manchester remained its ecclesiastical centre.

After the Norman Conquest, when the present county of Lancaster first took shape as a border palatinate under Roger of Poitou, Manchester was chosen as the seat of one of his barons, Albert Grelley. The barony included the greater part of the parish of Manchester and extensive lands in other parts of South Lancashire. A fortified hall which had some pretentions to be called a castle was built to the north of the church, on the site of the present Chetham Hospital; but the Grelleys seem to have chiefly resided on their estates in Norfolk and Lincolnshire. They intermarried with the great baronial families of the kingdom and the last male Grelley, who died about 1311, was a grand-nephew of John de Balliol, Edward I.'s King of Scotland.

Enlightened self-interest, however, if no warmer feeling, induced the lords of Manchester to foster the growth of the little community dwelling behind the church and hall. It is not possible to fix precisely the date when its urban character was fully recognised by the grant of tenements on burgage tenure, free from servile dues and services, and (with some restrictions) saleable and bequeathable by will together with a borough court separate from that of the lord, with a low scale of fines, though a lingering Sabbatarianism retained a twenty-fold fine for assault on Sundays. All that we can say is that these privileges were probably acquired before 1222, when Robert Grelley obtained a grant of an annual fair for the town from Henry III. By the end of the century the town contained about 150 burgage tenements, and the mention of a fulling mill shows that cloth-weaving had already established itself there. But trade did not entirely displace agriculture. Acresfield, one of the town cornfields, ran right up to the market-place, and remains to this day an open space (St. Ann's Square). Thomas Grelley, the last of his line, granted a charter in 1301 confirming and perhaps to some extent enlarging the privileges already enjoyed by the burgesses. But feudal lords were always less liberal than the crown in allowing independence to their towns, and the summons of borough representatives to Parliament, by Edward I., tended to narrow the definition of a borough. The result was that by a legal decision of 1359, Manchester was decided not to be a borough but only a market town. It lost any chance of securing the higher municipal franchises which Liverpool had obtained from Henry III, and even the borough court after a time ceased to have a separate existence, and was absorbed in the feudal court of the lord. Until the nineteenth century the town was condemned to remain under a quasi-manorial government which became more and more inadequate for its needs as time went on.

While the municipal progress of the town came to a standstill, its ecclesiastical status received a notable enhancement in the fifteenth century. The second line of barons of Manchester, descended from the sister of Thomas Grelley, ended with Thomas de la

Warr, who was rector of the parish when he succeeded to the barony by the death of an elder brother. He was deeply impressed by the inadequacy of the scanty clerical staff of the church for the spiritual needs of the huge parish, and in 1422 he obtained the royal license to substitute a college of a Warden and eight clerical Fellows for the rector. It became and remained the only collegiate church in the county. The clergy of the college were housed in the interesting building, then erected on the site of the demolished Baron's Hall, which survives, little altered, as the Chetham Hospital. John Huntington, the first warden, began the necessary enlargement of the church, which was completed on the same admirable Perpendicular lines by that magnificent but not very spiritual prelate, James Stanley, warden of Manchester and bishop of Ely (*d* 1515). Some of the wealthy Manchester clothmen contributed largely to the cost of the work. The town now sent its linen and woollen cloths to Ireland and other parts of the realm, and had a reputation for "good order and straight and true dealing" which caused it to resign its dubious privilege of sanctuary in favour of Chester. The wandering antiquary Leland describes it about 1536 as "the fairest, best buildid, quickkest and most populous tounne of all Lancastreshire." For the education of the youth of this growing community, Hugh Oldham, a native of the district and connected with Manchester families, founded a grammar school, the last of its pre-Reformation institutions, its statutes dating from 1525.

The college escaped the attentions of Henry VIII., but was dissolved in the first year of Edward VI., and, though refounded by Mary and again by Elizabeth (as Christ's College) it was on a reduced scale, part of its possessions having been granted to the earls of Derby. Among these was the old college house which, in the troublous days of the Civil War, fell into disrepair and was finally acquired, in 1654, by the executors of Humphrey Chetham, a wealthy fustian manufacturer, who left an endowment for a hospital for the support and education of forty poor boys and for the establishment of a library free to all, the latter a very early case of its kind (see page 54).

The most famous of the post-Reformation wardens of the college was Dr. John Dee, in Elizabeth's reign, whose dark reputation as an astrologer and crystal-gazer has obscured his more solid merits.

During the sixteenth century the prosperity of Manchester seems to have suffered no such set-back as was experienced by many English towns. The demand for "Manchester cottons" (*i.e.*, woollens) continued to grow, and a new and fruitful material had been found for its looms in "a kind of bombast or down, being a fruit of the earth growing upon little shrubs or bushes, brought into this country from Smyrna, Cyprus, Acra and Sydon, but commonly called cotton wool." But the new cotton trade did not begin to attain great dimensions until after the middle of the seventeenth century. This growth of the town was not accompanied by any adequate provision for sanitation, and it was on several occasions ravaged by the plague, notably in 1605 when about one thousand persons died of it.

Though Roman Catholicism retained a firm hold in some parts of Lancashire, Manchester, which had had its martyr (John Bradford) in Queen Mary's persecution, became a thoroughly Protestant and indeed largely Presbyterian community. In the Civil War, therefore, the town naturally took the side of the Parliament, and a few weeks after the opening of the struggle successfully stood a five days' siege by a royalist force under Lord Strange (September, 1642). The defence was conducted by Colonel Rosworm, a German military engineer, who had settled in the place earlier in the year. Manchester remained the headquarters of the Parliamentary forces in Lancashire until the end of the war.

The continuous growth of the town in the next sixty years is indicated by the erection of a second church (St. Ann's) in 1709, on a portion of the old Acresfield, and between 1719 and 1739 no fewer than 2,000 new houses were built. Engravings of the fine stone houses of the rich manufacturers are given in the margin of a plan of the town published in 1751. One of these early Georgian mansions survives in Long Millgate as the Manchester Arms Inn. The first Exchange was provided in 1729. At that time the population of the town was about 15,000, and it was

described by a visitor as "The greatest mere village in England," for it was still governed by an antiquated manorial court leet.

In 1745 the prose of Manchester was lit for a moment by a ray of romance. The Jacobite cause had sufficient support among the clergy of the collegiate church and in the town, where a nonjuring bishop, Dr. Deacon, had a congregation, to ensure Charles Edward a welcome on his march to Derby and to reinforce his army with a Manchester regiment, 300 strong. The failure of the expedition, and the tragic fate of the Manchester officers are commemorated in Shenstone's ballad of "Jemmy Dawson," and the lament, entitled, "Farewell, Manchester!"

Until after the middle of the eighteenth century Manchester grew steadily but with a certain deliberation. With the advent of spinning and weaving machinery, steam power, the factory system, and improved means of transport, its progress became hurried and feverish. The population leapt from 22,000 in 1770 to 70,000 in 1801 and 150,000 in 1821. The old Mersey and Irwell Navigation (1721) was superseded by the Bridgewater Canal (1772) and the Manchester and Liverpool Railway (1830). The first mill was built in 1781, and others followed in such numbers that labour had to be imported from the workhouses of the South. The many evils attendant on this hurried and unordered growth soon became abundantly evident. De Tocqueville, who visited Manchester in 1835, has left a lurid description of the grim conditions under which it worked, and the picture of Manchester industrial life in Mrs. Gaskell's "Mary Barton" (1848) and Dickens' "Hard Times" (1854) is scarcely more cheerful.

During the greater part of this formative period, Manchester had no representation in Parliament, and no adequate municipal government. The old manorial court leet, meeting twice a year and appointing a borough-reeve, and other officers with utterly insufficient powers, had indeed been superseded for police, lighting, and paving purposes by a body of Commissioners under an Act of 1791; but this was an unsatisfactory makeshift. The extension of markets, rendered necessary by the vast increase of population,

was hampered by the manorial rights of the Mosley family. Acquired for £3,500 in 1596 by their ancestor, Sir Nicholas Mosley, the first Manchester man who became Lord Mayor of London, they were only bought out in 1846 at a cost of £200,000.

It was these disabilities and grievances which made the town the great centre of the social and political agitation that after a stormy career, in which the "Peterloo" massacre was a sanguinary episode, issued in the passing of the Reform Bill and Municipal Corporation Act and the repeal of the Corn Laws. Manchester was given the right of sending two members to Parliament, was incorporated as a borough, and made sure of cheap bread for its teeming population. The triumphant leaders of the Free Trade movement continued to aim at securing fuller scope for English industries on those lines of *laissez faire*, disarmament, and non-intervention which German publicists have christened *Manchesterthum*, the principles of the "Manchester School." Their resistance to the Factory Acts had been practically overruled by 1847, but this was a question which even in the forties was beginning to have less direct interest for Manchester itself. The cotton industry was transferring itself to cheaper sites in outlying towns. When Coningsby, advised by Sidonia, that the Age of Ruins was past and Manchester, not Athens, was the place to visit, made his way thither, he heard with astonishment from a casual stranger that Manchester was "A dead letter in the way of machinery," and that if he wished to see life he must go to Stalybridge or Bolton. The turbulent city of factories had begun to enter on the serener middle age as business, banking and distributing centre of a great manufacturing district in which it still continues, though its many engineering works keep it in close touch with industrial conditions. About the time when the British Association last met in Manchester, signs of incipient senility were indeed being pointed out in its body corporate. The drastic remedy of a Ship Canal seems to have been effective, albeit costly. Manchester is now the fourth port of the kingdom in volume of trade and no more has been heard of these gloomy presages.

J. T.

Manchester of To-day

IN the sketch of historical Manchester the city is shown to have a somwhat chequered and not always entirely respectable past. There is seen to have been all along a kind of difficulty in telling what Manchester would do next. Thus a town which was steadily Presbyterian and Cromwellian in the seventeenth century is found compromising itself seriously in the eighteenth with Prince Charlie, and though Jacobitism was a passing fancy and one in which the whole heart of Manchester was not engaged it hardly promises well for Cobdenism, the triumph of sheer ratiocination for which exactly a century later the city was to win an abiding name. The question arises whether Manchester can be said to speak with one voice to-day? Does it incarnate itself in one type of man? Is there a "Manchester School?" is there a "Manchester man?"—is there in short a "Manchester?" That there used to be all these things we cannot doubt. Things do not get into literature unless they are first in life, and Victorian literature abounds in allusions to "Manchester" and the "Manchester man"—to Tennyson, Carlyle, Froude and many others they were both of them doubtful portents.

Even to-day there are English cities which are communities and even "circles." London is not one of them, but Liverpool obviously exists for the Mersey and the Mersey alone. Until a year ago every Birmingham man, in whatever hotel or boarding-house one found him, reacted with the certainty of a chemical experiment to the mention of the name of Mr. Chamberlain. Mr. Arnold Bennett again has unearthed—he has by no means created—a Potteries man, and though his Potteries men differ from one another in age, circumstance and moral direction they are all related to a type—the shape of the stones is different but the geology is the same. Perhaps it is only the smaller towns that can produce a type. The population of classical Athens was about 100,000 free men. In the English electoral system Athens would have had two Members of Parliament—perhaps

only one. The population of Manchester is 714,388 and if Salford be added, as it should be, it is 945,768.

But Manchester is not great so much for what is in it as for what is around it. That is to say, Manchester belongs to the higher degree of the capital cities. And it exhibits the tendency of capital cities to develop what the French call *quartiers* and what we might call settlements. A man might walk in a few moments of time along Market Street, and down Mosley Street into Oxford Road, yet he would find that he had traversed three climates as well as three streets. In Market Street he will be looking at Manchester through the eyes of its teeming provinces and will see, more especially if it be Monday, the invasion of those to whom the city is still spectacular, if not for its buildings, at any rate for its life; in Mosley Street he will be in the atmosphere of banking and exportation, and in Oxford Street he will be in a Bohemia of the humble arts of the music-hall and the theatre—Oxford Street in Manchester is a theatrical clearing house second only in importance to the Strand. And then the city has this further characteristic of a capital that it is an active manufactory of agitation and thought. It is the headquarters of the temperance movement and the vegetarian movement, and indeed harbours as many living causes as Oxford does lost ones. It has more journalists than any city in England except London and the most literary daily newspaper in the country. The repertory theatre came to life again in Manchester and called into being a school of dramatists who seek the eternal type and sometimes find it in their own city. Mr. Stanley Houghton was one of those who found it. He made Lancashire known far and wide through the medium of the stage and died writing a novel in which everybody lived in Whalley Range.

In such diversities of men the "Manchester man" as a single recognisable type begins to be difficult to find. It is to be remembered that when there was a "Manchester man" he lived in Manchester. Cobden, for instance, lived in Quay Street which is now trodden mainly by plaintiffs and defendants in the County Court. His friends lived in Mosley Street and King Street. They were all within a mile or so

of the Manchester Exchange. Nowadays, though thousands of people use these streets no one lives in them but care-takers. Mid-Victorian Manchester is indeed almost as hard to find as mediæval Manchester and, when found, seems hardly less far away. But a genuine relic of it exists in St. John Street off Deansgate. It is in these houses that the consulting doctors see their patients and in their plain and sedate interiors, behind their shutter-boxes and up their winding stair-cases, it is possible to re-construct the days of cake and Madeira wine, of anti-macassars and crinolines, of broad-cloth and starch, when Mendelssohn had uttered the last possible word in music and Lord John Russell in speech, and when England might be relied on with some confidence to think to-morrow what Manchester was thinking to-day. But even St. John Street is left at six o'clock to the ghosts. The doctors, also, join in the great exodus which leaves central Manchester after dark to the policeman and the cats. As a residential address "Manchester" may mean anything and does in fact mean nothing. "Fallowfield, Manchester," means something definite, and so does "Cheetham Hill, Manchester"—something definite and something socially and even racially quite different. Prestwich, the northern suburb was until recently the seat of an earldom and around its Church with the immemorial beeches there are the faint lingerings of the English eighteenth century. Kersal, the next suburb to Prestwich, is quite noticeably Levantine and Greek; in Cheetham Hill the shops advertise in Hebrew, and Saturday is the first day in the week; Withington is wealthy, a kind of upper middle-class Olympia with a rather pronounced air of "culture" and the higher life, and it had until recently a powerful German colony to which a great deal of Manchester's reputation for musical enterprise was due; Moss Side is middle-class and clerkly with ambitions inclining to the semi-detached, though it harbours in its temperate and insular zone a surprising settlement of Moors whose dress adds colour and variety to the panorama of the business streets. Into such different suburbs the spirit of the old authentic Manchester is diffused every night and,

though it collects again the next morning, it is conceivable that much of it evaporates on the double journey of going out and coming back; it travels further even than the radius of these suburbs—far into Derbyshire and Cheshire. Residential Manchester is grafted like a new social surface over many miles of territorial Cheshire.

But the development of Manchester on its Lancashire borders—its northern and eastern frontiers—is more striking still. We have seen how Coningsby was advised by the casual stranger to leave Manchester, if he wished to see life, and go to Bolton or Stalybridge. If he went to-day and more especially if he went by tram-car, which he might conveniently do, he would find it difficult to tell where and at what point the transition had been made from Manchester which was not "life" into Stalybridge which was. The truth is that this transition from Manchester to any of the dozen towns which surround Manchester is now made without any change at all in the aspect or the feel of things. From Manchester to Bolton or to Rochdale it is all of a piece and towns are carried into one another by gas-lamps and pavements without the interval of as much as a hedge or ditch. From Manchester to Oldham it is one street, and very nearly one row or one terrace—the continuation of the same idea along seven paved and sewered miles. This community of South East Lancashire is the closest compression of industrial humanity in the world—the second closest is probably in China. It is "Greater Manchester."

The incorporation of Manchester was one of the great works of Cobden's life, though it has been overshadowed by the greater enterprise which occupied his later years. It remains for some Cobden of the future to make Manchester the seat of the federated local government of South East Lancashire. Within an area of ten or twelve miles of the Manchester Town Hall some sixty or seventy local authorities are defending administrative frontiers which have long ago ceased to exist either in the visible aspect or the nature of things. The towns which are county or municipal boroughs—the larger and the lesser planets in the constellation—govern themselves, but, scattered

in and among these towns is a great quantity of "town-dust" which is collected into urban district councils and governed very largely from remote high-handed Preston. In the days when municipal government began and ended with the lamp-lighter and the watchman the arrangement worked, but municipal government nowadays is, and in South East Lancashire especially it has need to be, an affair of cleaning the sky which can only be cleaned in large patches, and of purifying rivers which can only be purified over long windings. It is said that the black smoke of Manchester is not smoke of its own combustion (or partial combustion), but is a present which it receives every day from the chimney of a neighbouring borough which has not caught up with the times. And then commodities like electricity can be better supplied to a large area than a small one, and social problems like that of housing need the wide latitude and the large view. The Rossendale Valley in the North, the Pennine Hills on the East and the Wigan coal fields on the West would be the natural boundaries of such a federated community—psychological as well as physical frontiers. Federation would have the important effect of finding a way out for the future of Salford. Salford, while it steadily refuses to be amalgamated with Manchester might come into a federated system of which Manchester happened to be the seat, and still keep its face and its Town Hall. If it is difficult to tell when Manchester ceases to be Manchester and becomes Bolton or Rochdale or Oldham, it is quite impossible to perceive the thousand different points at which it becomes Salford, and the effect of the division of one community into two towns is that much municipal work is done twice over—not quite so well the second time as the first. If Manchester and Salford were combined the resulting city would be easily the second largest in the United Kingdom. It is because she may not count in Salford that Manchester loses her place.

Manchester, then, may become a great centre of government as it is already a great centre of commerce. However well she may discharge the part it is doubtful whether she will ever quite look it.

She is a city with a bad town planning past in front of her. Attempts are being made here and there to rectify matters. Along with the present extension of the Royal Exchange something is being done to rectify the building line of Cross Street so that the new Exchange shall be at any rate visible when it arrives at its finished form. It is indeed the misfortune of Manchester that her buildings, such as they are, cannot be seen and have to be taken on trust. Some of them are credibly reported to be very fine —the Post Office, for instance, if the spectator could but get far enough away to see it. In one case the directors of a bank have commissioned their architect to design a building definitely for a narrow street and the result is a success, but the great and splendid home of the Calico Printers' Association, can only be seen with such a craning of the neck as few have the time or inclination to give it, and the Rylands Library has to be pieced together with such hints of it as one can get from this corner and from that. Manchester has until lately lacked a central site such as that which Liverpool has for its St. George's Hall. The removal of the Infirmary from Piccadilly provided the site but the mind to use it is still wanting, and after the war the means may be wanting too. It was not until months and even years had gone by that the impulse came to remove out of sight the dust and the *débris* of the old building, and even yet it has not seemed necessary to level the hills and valleys. It remains an open space—the sort of open space that is created by an earthquake. It seems as though Manchester had a soul for everything except bricks and mortar. Portland Street, indeed, has achieved unmistakable dignity and has done it all the better for never having intended it. And this again is dignity of character, the impressiveness of immense reserves. It is a business street without shops—in the length that counts at anyrate—and still more to the point without shop windows. Its long featureless vista is like a gallery draped with the majesty and the mystery of British credit. It is the bricks and mortar version of a Bill of Exchange, a document which is impressive not for what is on its face but for what lies behind it. The plain, solid

names on the door cheeks and the window blinds of Portland Street read, as they go on and on and on, like an epic—the brass plates would do for a frieze on a Parthenon of Victorian Commerce.

Manchester, indeed, asks of the beholder that he shall see her with the eye of imagination. If he does so he will not miss the greatness of the city and he may even see why Disraeli mentioned her in the same breath as Athens. All day there goes on that perpetual slow rolling of merchandise from the warehouses to the Docks. To read the directions on these hooped bales of fabric is to have glimpses into the strange places of the earth. They are directed and will shortly be on their way to Bagdad, to Kurachi, to Shanghai and to Lagos—presently they will be blistering on the quaysides of the hottest ports in the world. There is in these parcels the artless finery of the negro woman, and the highly sophisticated draperies for the harems of Egypt. Behind those windows in Portland Street they follow, if they do not really guide, every caprice of fashion in the Levant and along the shores of the Persian Gulf. Manchester used to send away thousands and thousands of yards of a print dyed a kind of bruised purple and decorated with a tiny pattern in birds-eye. It was the traditional garment of the slave women of Brazil. The slaves were emancipated; the print fell into disrepute; the ladies would wear it no more, and a Lancashire calico-printing village was shaken to its very foundations. It is by attending to such niceties as this that Manchester keeps its place. Its traders have their eyes and perhaps even their microscopes on the uttermost ends of the earth.

Economists have, indeed, shaken their heads over the delicate and complex balance on which the prosperity of Manchester rests. It brings its raw material thousands of miles from the West; fashions it in the towns and villages of Lancashire; and sends the finished product thousands of miles to the East. It is all done on a margin of profit in which the variation of a thirty-second is an event—Manchester keeps its books in the more remote fractions. The cotton trade has in it a forced exotic quality and probably those who have known Manchester well will

be conscious of an exotic quality in the atmosphere of its narrow streets. It is the exudations of the "grey cloth." This is the product which is hurled out of the seventh story windows of warehouses in the side streets. It falls solid and ponderous followed by a smoke-like flutter through the air of a dishevelled piece, and the escape of the serene devotee who is building it up on the lorry below seems a succession of miracles of which each one may be the last. It is the colour of kitchen soap though Manchester insists on calling it "grey" cloth and it is still full of the original oils, unregenerated, uncouth. The streets reek of "grey" cloth. The great cotton safes at Trafford Park are hot and tropical and aromatic as a conservatory.

Manchester has, as we said a few minutes ago, grown too big to accommodate the old coherent communal spirit. It has grown too big also, and not only too big but too diffuse for there to be anything like a discoverable common centre of social life. One of the last refuges of the authentic Manchester culture disappeared a few years ago when Miss Gaskell died and her drawing-room in Plymouth Grove, the home of a sedate enlightenment was closed. The Free Trade Hall on Thursday nights in winter still contains a large infusion of the social essence of the city. These are the nights of the Hallé concerts. The night of the Hallé concert is announced in the procession of motor cars along the roads that come into the city from Cheshire, and the tram-cars to Withington and the suburban trains are loquacious after the concert with the higher musical criticism—a Hallé audience inclines as much to analysis as appreciation. But the more the centre of Manchester social life is sought, the more evasive and volatile it is found to be. Cheetham Hill, for instance, turns on an axis which is quite its own. Cheetham Hill is packed with a large and now over-flowing Jewish population and even Cheetham Hill has its racial sub-divisions—its states within states—with which only Rabbis and rate collectors are familiar. The Greeks, again, are a community in the city, rather than of it, forming a little aristocracy of commerce to themselves. A marked change was made in the habits of Manchester

when it was endowed a few years ago with the largest and most luxurious of provincial hotels. This hotel with its theatre and its music and its afternoon teas was intended no doubt for the stranger, but Manchester straightway fell upon it and domesticated it. Quite a new habit of family dining out was introduced; dinner parties and dances began to be adjourned from home to the hotel, and it was reserved also to the hotel to discover in Manchester a population with leisure in the afternoon. The private affluence of the city is shown in the circumstance that one letter in the alphabet has not been enough for the registration of its motor cars.

It has been said that the present war constitutes a definite fissure in the modern world's continuity—a sort of geological "fault" in the stratification of time. Already Manchester is becoming acclimatised to war and "twelve months ago" begins to look antiquated, and almost antediluvian. Street lamps muffled like highwaymen and tramway lights tinted the colour of the raspberry seem to belong to the natural lot of man—after twelve months of war it is almost as difficult to remember what was as to foretell what will be. It remains, however, to indicate how Manchester has answered to the call for men. At the beginning of the war the total male population of the city and of Salford between the ages of 19 and 40 was 163,858. At the moment when this is written the number of men who have enlisted in Manchester and Salford is barely short of 90,000 and before the war is finished there is little doubt that the round and satisfying figure of 100,000 will be reached. After making all deductions, considerably more than half the fit and free of Manchester will be found to have responded in their own persons to the country's call and this excludes those who were already under arms in the Territorials or the Reserves. The Territorial battalions of Manchester and Salford have been found equal to the severe ordeal of the Dardanelles, and in the Regular Army the city is represented by two battalions which are among the most illustrious in the line. And we stumble here upon something which is really permanent in the history of Manchester, something in respect of which it is

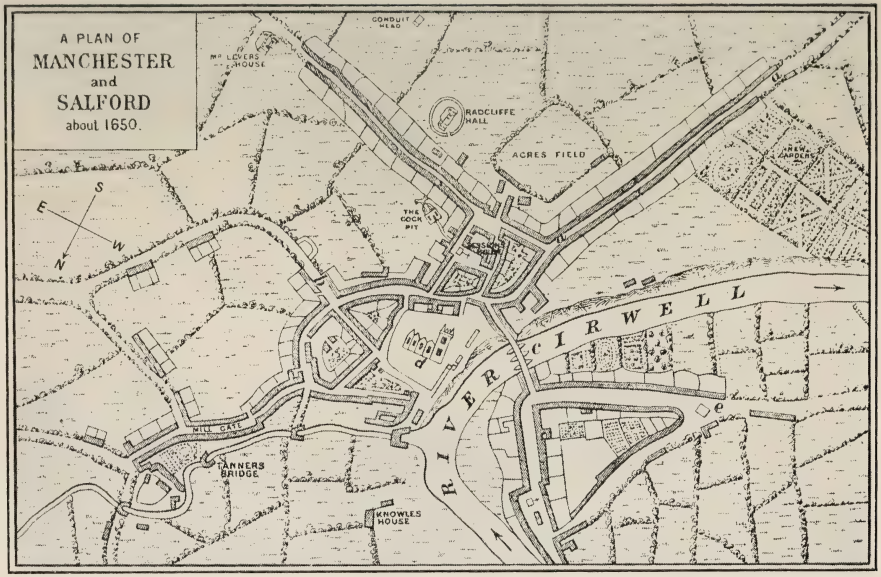


PLATE 3.

a —Deansgate ; *b*—Withy Grove ; *c*—Salford Bridge ; *d*—Parish Church ; *e*—Salford Chapel.

as it was. A century ago, when the country was in trouble, even as it is in trouble now, it was possible to count out of a total population of about 80,000, nearly 7,000 men who were voluntarily and not professionally under arms. It was the same in the Mid-Victorian fifties when the Volunteer movement was revived—no city in England could show longer battalions of the be-whiskered "Rifleman" of those days. It is indeed, the curious fate of Manchester to be renowned at once for the theory of pacifism and the practice of arms.

W. H. M.

Undertakings of The Manchester City Council

INTRODUCTION

SEPARATE articles in this Handbook deal with Education in Manchester, the City Art Galleries and Libraries, with the Ship Canal and School of Technology (see pages 45 and 79), all controlled by the City Council. There still remains, however, so much to describe that it is impossible, in the space available, even to mention all the undertakings of the Council. An article dealing with so vast a field must necessarily be scrappy and disjointed and can at best hope to give an idea of the scope and variety of the work and to indicate certain important directions in which it is developing. Perhaps the most important of the varied activities of the Council is its work in connection with the public health. This is roughly divisible into three sections. Firstly, the direct prevention and treatment of disease by means of health visitors, sanitary inspectors, and municipal hospitals; secondly, the work of cleansing, including not only the cleansing of streets, the removal of refuse and the provision of a drainage system, but also the purification both of the air and of the

water supply; and thirdly, the direct improvement of the surroundings in which the citizens have to live, including the systematic enforcement of the laws to compel landlords to provide healthy houses, the building of houses by the municipality itself, the provision of public baths and wash-houses, of parks and open spaces, of cheap gas and electricity and of cheap and rapid means of transit from the centre of the city to the healthier suburbs. It is satisfactory to know that as a result of this work the death-rate in Manchester as a whole has fallen in the last twenty years from about 23 to about 17 per 1,000 and that even in the most crowded slums, where the population tends constantly to grow poorer owing to the steady movement outwards of those who can afford to live further afield, there has, instead of the increase that might have been expected, been a substantial fall in the death rate.

Hospitals for Infectious Diseases.

Manchester is well provided with voluntary hospitals for the treatment of surgical cases and most diseases other than infectious fevers and tuberculosis (see page 55). The City Council has accordingly provided at Monsall Hospital 500 beds mainly for fever cases, as well as accommodation at 4 Sanatoria for tuberculosis cases. The question of tuberculosis has been energetically taken up by the Council and a comprehensive scheme adopted under the Insurance Act. 150 beds are provided at Baguley and another 150 will shortly be opened there. There are 50 beds at the Abergele Sanatorium in very beautiful surroundings, 60 beds at Delamere, and temporarily another 50 beds at Clayton. There is a central dispensary at Hardman Street, in Manchester. The medical staff consists of five tuberculosis officers and four part-time physicians.

A new departure in connection with this scheme is the establishment, in conjunction with the Insurance Committee, of a Tuberculosis After-Care Committee, with the object of visiting discharged patients, arranging that suitable employment is found for them, and, where advisable, giving financial assistance to help to prevent them sinking back into illness.

Infant Welfare.

Infant welfare work in Manchester has hitherto been mainly in the hands of two agencies—the City Council and the voluntary Schools for Mothers, established in 1908.

The supervision of midwives is carried out by a woman Medical Officer. In 1912 Manchester adopted the Notification of Births Act, and there are now 20 Health Visitors visiting in the poorest districts of the city—weighing babies and giving advice as to food, clothing, etc. These visitors also report on insanitary conditions in the homes.

By 1915 the Schools for Mothers had organised six centres. The work at these centres is carried out by a whole time medical officer, four superintendents, three paid assistants and many voluntary workers. Mothers are encouraged to bring their babies to be weighed regularly and to get skilled advice and they are also visited in their homes by the trained workers. There are classes organised in Infant Hygiene, Dress-making, Cooking, etc., and dinners for expectant and nursing mothers are provided, either free or on the payment of a small sum. No treatment is given.

There can be little doubt that all these activities, together with the gradual improvement in sanitary conditions generally, have had considerable influence on the infantile death rate of the city. This has fallen in Manchester during the last ten years from 168·5 to 128·7 per 1,000. But the existing state of affairs is still far from satisfactory. There are not enough Health Visitors to cover all the necessary districts nor to be able to visit babies over one year of age. The Schools for Mothers, in spite of rapid extension of their work, could not cover the whole city and there was also felt on all sides to be a lack—notwithstanding the excellent service of hospitals—of facilities for medical treatment for babies and children under school age. This lack has been further emphasised since the institution of compulsory medical inspection of school children, by the discovery of the large number of children under five years of age suffering from anæmia, ricketts, bad teeth, enlarged tonsils, etc., and other defects which might have been remedied earlier.

Great impetus and encouragement was given to this side of the Municipal programme, by the Local Government Board circular of July, 1914, promising a grant in aid of schemes for maternity and infant welfare. Manchester was among the first of the great cities to take advantage of this offer and an excellent scheme was passed by the Council in April, 1915. It provided for taking over the existing centres of the Schools for Mothers and adding four new ones—making ten in all—a full time medical officer, four nurses, ten additional health visitors (making a total of thirty) and attendance by children's specialists once a week. Thus the best medical advice and treatment of various ailments will be easily available for babies and children under school age and the clinics will form a connecting link with the recently established school clinics. Cases requiring serious treatment will of course be referred to the Hospitals. At these Maternity Centres opportunities will also be given for expectant women to have medical advice and, when desired, they will be visited in their homes by two midwives working under the supervision of the Midwives Supervising Committee. In this way it is hoped to make a beginning in systematic ante-natal care which, in conjunction with the other work, will prove one of the most effectual means of saving the lives of the next generation.

School Children.

The arrangements made for the systematic inspection and treatment of School Children are dealt with in a special article on page 71, describing the work of the Education Committee.

Atmospheric Pollution.

The Manchester City Council have for many years pursued a vigorous policy with regard to smoke abatement. As regards factory smoke, they have five inspectors who devote the whole of their time to taking observations of factory chimneys which emit excessive smoke.

PLATE 4.

THE OLD OWENS COLLEGE, QUAY STREET.

Apart from this routine work, the Council recently appointed an "Air Pollution Advisory Board" for the purpose of scientific research into problems connected with the abatement of smoke. The Board consists of certain members of the Council working in conjunction with scientists representing the University, the School of Technology, and various industries in the Manchester neighbourhood. It is both a practical and scientific body, and its research already shows valuable results. Investigations are being made to determine the nature and amount of soot and other impurities in the air, and also the loss of sunlight in Manchester due to the presence of smoke. A further investigation is about to be undertaken into the question of the relative efficiency of the various types of domestic fire-grates burning bituminous coal. It is known that both the heating power and the amount of smoke produced by different types of grates vary enormously, and it is believed that an authoritative pronouncement as to the merits of different types would be welcomed by architects, builders and by the general public, and would ultimately lead to a considerable reduction of domestic smoke.

The work of this Board is an interesting instance of the recognition by a public body in England of the value of scientific research, and it is certain that if the example of Manchester is followed in this matter by other local authorities, very valuable results will be achieved. It is clearly more to the interests of the community as a whole that smoke should be prevented by the spread of scientific information as to improved methods of smokeless and efficient combustion, than by the old method of prosecution of manufacturers.

Cleansing.

The work of the Cleansing Committee covers the sweeping and watering of the streets, roadways, passages and courts within the city, the collection and disposal of nightsoil and other refuse from dwellings, warehouses and public institutions, and the cleansing of the markets, slaughter houses and abattoirs.

In the City of Manchester there are 544 miles of streets, a large portion of this area being swept daily;

the contents of some 2,138 pail closets and 144,718 ash-bins and boxes are removed once, twice or three times a week, and 612 middens are emptied as occasion demands. During the year ending March 31st, 1914, nearly 1,000 tons of refuse per working day were collected and disposed of.

The Committee employ about 1,760 men and 460 horses, and own some 600 vehicles, including a large number of vans, carts and lurries; also a steam-tug, a fleet of 10 barges, about 109 heavy railway trucks, 4 small locomotives, and 250 light railway trucks. They build vans, lurries and carts, and keep in repair all the machinery and rolling stock used in this department; make harness, brushes and receptacles for closet and household refuse, and manufacture concentrated manure, mortar, soap, oils, grease, and disinfecting powder.

The Committee own 24 depôts together with 3 large tips in the city. They also possess estates outside the city having a total area of nearly 4,000 acres. Over 1,700,000 tons of refuse have already been absorbed on these estates, with the result on the one hand of relieving the city of this enormous amount of refuse, and on the other hand of converting the estates from unreclaimed moss into fertile farming land. There are 58 tenant farmers on the estates. The work of these estates constitutes a particularly interesting example of the utilisation of a waste product which in former years was a serious nuisace.

Main Drainage.

The drainage from buildings and streets in the city was originally discharged into the rivers. The questions of sewage disposal, flooding and effluents from factories were dealt with piecemeal until 1885, when a scheme for the drainage of the city was drawn up by the then City Surveyor and partly carried into execution. The area of the city has since increased from 5,934 acres to 20,799 acres and in 1911 a complete scheme was drawn up and approved. The total area covered by this scheme is 39,100 acres and the new sewers will be of sufficient capacity to meet the estimated requirements for 50 years. The sewers vary

in size from $2\frac{1}{4}$ feet in diameter to $15\frac{1}{4}$ feet. They are composed of red engineering bricks and shale bricks set in cement mortar. Over $12\frac{1}{2}$ miles were completed by March 1914.

Sewage Purification.

The system adopted at Manchester for the purification of sewage consists of anærobic fermentation in open septic tanks, followed by oxidation of the effluent by single or double contact on ærobic bacteria beds.

The sewage of Manchester presents many difficulties in its treatment, because of the large volume of manufacturing refuse which is discharged into the sewers. Considered as a domestic sewage it is of average strength, but these effluents contain organic matters oxidisable by permanganate which are frequently bactericidal. Iron and lime salts are also present.

All the sewage arriving at the Davyhulme Works passes through a system of screens and catchpits designed to intercept the coarse floating matters and heavy detritus. It is then passed, by means of a channel 16 feet wide, to a series of 12 tanks, 7 of which are the original chemical precipitation tanks, transformed into open septic tanks. These tanks have a total capacity of 16,000,000 gallons. Four other tanks are used as storm water detritus tanks.

The sludge produced in the tanks is forced by means of ejectors into two storage tanks on the banks of the Ship Canal, whence it flows by gravity into the sludge steamer, and is deposited at sea beyond the Mersey Bar.

The sewage is not subjected to any preliminary precipitation; all the matters in suspension which escape the screens are allowed to enter the septic tanks. The screened sewage requires 16 hours in which to pass through the septic tanks. It is then distributed by a series of open channels to the various contact beds, the operation of which is effected by hand, by means of sluice valves and semi-circular weirs.

The total area of the works is about 221 acres. The area of land occupied by tanks is 10 acres, while

that covered by bacteria and storm beds is 112 acres. The volume of sewage received at Davyhulme during the 53 weeks ended 31st March, 1915, was 15,125,000,000 gallons, the average daily flow being 40,500,000 gallons. The total cost of the purification of the sewage during the year amounted to £32,400, or an annual cost per head of the population of 11d.

Housing.

The work of the Housing Committee is divided into two main sections, firstly the improvement of existing houses, and secondly the building of new houses. The former is by far the more important part of the work. For the purposes of this work the city is divided into 33 districts, to each of which is allotted a sanitary inspector. When any house is reported by the sanitary inspector as being unfit for human habitation the matter is carefully investigated by the Medical Officer of Health and the Committee, and if necessary a closing order is made, under which the landlord is compelled either to make the house fit for human habitation or to close it altogether. This work has been carried out consistently and energetically in Manchester for the last 20 years, with excellent results. During that period back-to-back houses, which owing to the lack of light and ventilation are so favourable to the propagation of consumption and of which there were previously 9,000, have been practically abolished. 70,000 water-closets have been introduced, replacing pail-closets, privy middens, etc., perhaps the most fertile source of typhoid, private back-yard space provided in a large number of houses, and in nearly every case there is now a supply of water laid on inside the house. Twenty years ago it was not uncommon to find one tap in a yard supplying 20 or 30 houses. In view of the fact that Birmingham has still over 40,000 back-to-back houses, the value of this work is clear.

The Housing Committee has also pursued a fairly active policy in the erection of new buildings, both in central areas to prevent overcrowding, and in the suburbs to help in the movement of the population

from the centre. The Corporation dwellings, at the present time, house a population of about 2,900. Unfortunately, however, there is a loss on these houses of about £11,000 per annum, and the Council is very loath to permit the Sanitary Committee to extend its works on these lines owing to the heavy cost of so doing.

The healthiness of a house depends, of course, on the number of people occupying it, and the Sanitary Committee is constantly endeavouring, through its inspectors, to prevent overcrowding. The general policy of the Council is reduction of the pressure of the population in the central areas, on the one hand by preventing overcrowding and the destruction of unhealthy property, and on the other hand by cheap tram fares and to some extent by the provision of municipal houses in the suburbs.

That these measures have been effective is proved by the fact that there has been a decided diminution in the density of the population in the central areas.

The Town Planning Committee, which was only appointed in November, 1911, should ultimately do valuable work in this direction. The procedure is, however, complicated and slow, and hitherto the Committee, apart from getting the consent of the Government to the preparation of four schemes, has only actually passed one scheme for the construction of an improved new main road to the south.

Parks and Recreation Grounds.

The work which the Manchester Parks' Committee is carrying on was inaugurated, as in the case of many useful Municipal enterprises, by private effort. In 1846 two fine open spaces, known to-day as Philip's Park and Queen's Park, were presented to the city and since then, park after park has been added, until to-day, we find that Manchester provides 64 Parks and Recreation Grounds, with a total area of 1,440 acres, at an annual expenditure of £80,000.

Until recent years the wants of the young people were somewhat neglected, but of late greater attention has been paid to the adequate provision for the playing of games, and the later purchases of land have been specially for playing fields (see page 110).

In addition to the games in the larger parks, there is a system of play centres for children in the most congested parts of the city. Ladies are engaged to organise the children's play and supervise sand gardens for the very little ones, and in 1914 over 200,000 individual visits were paid by the children to these play centres. In addition to this, 12,000 children were taken in 1914 to the more distant parks during the school holidays.

With the object of getting the people out into the open air, the Parks' Committee have for many years engaged the services of upwards of 40 bands who give open-air performances during the summer evenings in the Parks and Recreation Grounds and large numbers assemble there on these occasions.

Baths and Wash-houses.

In a city where large numbers of the dwelling houses are old-fashioned, cramped, and in no way arranged for the convenience of the house-wife the public wash-house has become almost a necessity. The opportunity to take the week's washing out of the overcrowded house and get it thoroughly done in a clean, properly arranged building with up-to-date appliances has made a real difference in the lives of many hard-worked mothers. Manchester has at present 7 wash-houses, containing 199 washing stalls, and used last year by 142,860 women. The charge per hour is 2d.

There are 18 separate bathing establishments including 33 swimming baths, 3 sets of Turkish baths, and 758 wash-baths, the charges for which vary from ½d. to 6d. In the swimming baths free yearly tickets are presented to scholars who can swim 200 or 500 yards. 1,004 of these tickets have been presented for this year. Special plant has been installed, by which, in five hours, all the water used can be ærated, filtered and returned to the bath.

The last innovation of the Baths' Committee is the provision of washing troughs, where children can have a thorough wash: soap, hot water, towels, etc., being provided free. These have been much appreciated by the children, parents, and school authorities.

Electricity Supply.

The Electric Lighting Provisional Order was acquired in 1890, and the supply of current (for lighting purposes chiefly) was first given in 1893—for the central area of the city—from the Dickinson Street Station.

Consequent upon the growth in the general demand for electricity supplies, and in order to provide the necessary current for working the trams in the centre of the city, a site for a second generating station was acquired in 1896 in Bloom Street, and operations were commenced therefrom in 1901.

Both the Dickinson Street and the Bloom Street Generating Stations are situated on the Rochdale Canal, and depend thereon for both coal and condensing water supplies.

Their combined installed plant capacity is 14,000 K.W., and they are operated on the continuous current, low tension system, with a generating voltage of 420—550.

The Stuart Street Station has an installed capacity of 60,000 K.W., and employs chiefly turbine plants, the largest unit being rated at 15,000 K.W. It is operated on the high tension, three-phase, alternating current system at 6,600 volts, and supplies were first given therefrom in 1902.

The area of the district over which powers to supply current are held by the Manchester Corporation now amounts to 46 square miles, and serves a population estimated at 750,000.

Inasmuch as the effective capacity of the three existing generating stations is within measurable sight of being fully utilised, the Corporation have secured some 17 acres of land at the westerly end of Trafford Park, in the parish of Davyhulme, whereon to erect a fourth generating station, which will be known as the Barton Power Station.

This Station is being designed for an installed plant capacity of 160,000 K.W. The works to contain the first section of the plant, *viz.*, 30,000 K.W., are about to be commenced.

The plant in the new station will generate three-phase, alternating current at 6,600 volts, which will be stepped up to 33,000 volts. for transmission into the existing area supply.

Gas Supply.

Gas was first introduced into Manchester in the year 1807 and Works established in 1817.

The control of the undertaking was in the hands of the Commissioners of Police until the year 1843, when it was transferred to the Corporation.

The price of gas in 1843 was 6s. per 1,000 cubic feet. In the year ended March 1915 the average price received was 1s. 11·74d. per 1,000 cubic feet.

Owing to the present high price of coal and other expenses caused through the war it has been found necessary to increase the price temporarily by sixpence per 1,000 cubic feet.

The Manchester Corporation Gas Works are fifth in order of size of the Gas undertakings of the United Kingdom and the capital outlay on Works and Distributing Plant amounts to £3,043,769.

Since the year 1843 the Rates of the City have been relieved in one form or another out of gas profits, to the extent of £3,217,174.

At two of the four Works of the Department, Rochdale Road and Droylsden, the coal is distilled in vertical retorts on the continuous system, the latest and most scientific method of carbonising coal for the production of illuminating gas.

At the Bradford Road Works a gas holder of a capacity of 10,500,000 cubic feet has been recently constructed, this being the second largest structure of its kind in the United Kingdom. At the same Works are also situated Chemical Works for the manufacture of Sulphuric Acid and Sulphate of Ammonia, from the Sulphur and Ammonia recovered during the process of gas manufacture.

Tramways.

The Manchester Corporation Tramways System is one of the largest in the Kingdom. Its length measured as single track is 194 miles.

The capital outlay on the undertaking is £2,216,008, the outstanding debt £1,648,183, and the amount of the Reserve and Renewals Fund £428,000.

During the 14 years the Corporation has been operating the system a total sum of £915,000 has been paid out of the profits of the undertaking towards the

PLATE 5.

THE MUNICIPAL SCHOOL OF TECHNOLOGY.

relief of the City Rates. In recent years the amount has been £100,000 per annum.

The number of passengers carried last year was 202,768,420.

The total number of employees, in normal times, is about 5,000. Since the outbreak of war nearly 2,000 have joined the colours.

The development of the undertaking since the Corporation took over the concern from the old Tramways Company has been remarkable. The continuous growth of traffic each year is causing serious congestion in the central parts of the city and the Committee has presented a full report to the Council on this subject, setting forth what they consider to be the best methods of relieving the congestion. The remedies suggested are the formation of certain new arterial roads, and the construction of a number of tramway terminals in the centre of the city.

The Water Supply.

The provision of water for the city has been in the hands of the Corporation since 1847, since when practically the whole of the existing supply system has been constructed. At present it is necessary to provide for the daily consumption of 45 million gallons.

The supply, which is obtained entirely by gravitation, comes partly from the Longdendale Valley, about 16 miles east of the city, and partly from Lake Thirlmere, in Cumberland. The Longdendale Valley drainage ground covers some 30 square miles and can give an average supply of 22 million gallons a day. There are five reservoirs in the Valley, three used for the city water supply and two for storing flood water and compensation water for the River Etherow. Machinery is provided for measuring the compensation water, which is used, on its way to the measuring basin, for generating electricity. Nearer the city are two more supply reservoirs and an auxiliary reservoir for regulating the supply of certain mills.

The Aqueduct from Lake Thirlmere is nearly 96 miles long. The natural outlet at the north of the lake, into St. John's Beck, has been blocked and fresh overflow outlets have been constructed at a higher level. Compensation water for the river is

passed through a tunnel into a measuring basin. The water for the city is brought away at the south end of the lake, into a large straining well, and is then passed into the Aqueduct through copper gauze strainers. The level of the lake is ultimately to be raised 50 feet, at which height the water that can be stored will be sufficient to give a supply of 50 million gallons a day for about 160 days continuous drought, after providing the necessary compensation water.

The water from both sources is very soft and of excellent quality. Supplies in bulk are given to Salford, Stockport and Hyde Corporations, the North Cheshire Water Company, and several Urban District Councils.

In addition to the ordinary water supply, the Corporation has laid down a system of hydraulic power, with three large pumping stations, available night and day and charged for by a sliding scale.

E. D. S.

Social Amelioration in Manchester

THE Social Activities of a large city, even under normal conditions, are difficult to describe and the war has added to the complexity of local problems without introducing any comprehensive uniformity.

At the outbreak of war a Local Representative Committee was formed on the lines laid down by the Local Government Board, and has carried on its work through the medium of five Sub-Committees:—

The Finance Sub-Committee at the Town Hall.
The Soldiers & Sailors Relief Sub-Committee.
1, Dickinson Street, Manchester.
The Unemployment Relief Sub-Committee,
St. Ann's Schools, Deansgate.
The Voluntary Workers Sub-Committee,
7, Brazennose Street, Manchester.
The Women's Employment Sub-Committee,
16, Deansgate, Manchester.

Space will not allow of description of the work which has been done, but reference should be made to the Hon. Secretaries at the addresses given.

With regard to Poor Law. Until April of this year three unions, the Manchester, South Manchester, and Prestwich carried on an independent existence. The amalgamation of these three unions into one large union, covering the whole city, has only recently been effected, and the policy of the new Board is as yet insufficiently defined to enable one to forecast possible future developments. Those who are interested in Poor Law Children should not miss the opportunity of seeing the Styal Schools on the Cottage Home system, and the Swinton Schools on the Barrack system. The three large Infirmaries, Crumpsall, Withington, and Booth Hall would compare favourably with any hospital in the country.

In endowed charities Manchester is not so well supplied as Salford, whose Booth's Charity enables a large number of aged men and women to receive regular pensions. The Clark and Marshall Charities administered by the Lord Mayor for the time being, are expended in the provision of blankets, sheets, etc. for aged poor and sick, in subscriptions for voluntary societies, and in grants to individual cases of hardship. The Mayes' Charity (a pension charity for the aged) and Barnes Samaritan Charity (for the infirm) grant annual pensions which enable a considerable number of the more respectable poor to avoid applications to the Guardians. The Cotton Districts Fund, which is the invested surplus of the Relief Funds raised at the time of the Cotton Famine, provides at reduced charges convalescent treatment at the Southport Convalescent Hospital, the Children's Sanatorium, Southport, and the Devonshire Hospital, Buxton. The activities of this fund are not limited to Manchester but cover the whole of the cotton districts.

The District Provident Society, which was founded in 1833, and later adopted the additional title of Charity Organisation Society, carries on a considerable work of relief in cases of sickness and convalescence, enquiry for other agencies and private individuals, and has built up a system of Mutual Registration which is now placed at the service of the National Relief Fund and possesses points of special interest.

The City League of Help, an organisation of voluntary visitors based on Wards and Polling Districts, has,

for the duration of the war, offered its services to the National Relief Fund, and the office staff are responsible for the organisation of the Voluntary Workers Sub-Committee.

The special interests of children are met in several directions. The Holiday Camp of the Boys' and Girls' Refuges at Birkdale and theWood Street Mission Camp at St. Anne's, provide thousands of happy youngsters every year with a week's holiday under excellent conditions. The Children's Holiday Fund organises holidays in country cottages for those to whom strenuous camp life is not an attraction. The Country School of the Manchester Education Committee at Mobberley, a unique experiment, combines the advantages of a country holiday with the continuance of school discipline, by sending whole classes of children for a fortnight's stay accompanied by their teachers.

The employment of children in street trading has been controlled with excellent results by the Street Trading Department of the Town Hall; and the regulations in force have been a model which has been copied by other towns.

The Juvenile Employment Bureau, carried on by the Education Committee in co-operation with the Board of Trade Labour Exchange, is not, as yet, fully developed, and its activities have been affected to some extent by the work of the Education Department in connection with the National Relief Fund. The question of employment of children of school age is is at present under consideration by the Education Committee.

The University Settlement, Ancoats Hall, Every Street, has houses of residence for men and women respectively, and in addition to the ordinary work of the Settlement, has organised a day school for crippled children which has been taken over by the Education Committee. It is also the centre of an active branch of the Poor Man's Lawyer Department. The latter Department, which has four branches, carries on a large and increasing work in advising the working classes in their legal difficulties.

The Hulme Settlement, Embden Street, Hulme, on a smaller scale, provides a settlement in one of the poorest districts.

PLATE 6.

THE JOHN RYLANDS LIBRARY.

THE MAIN LIBRARY.

Those who are interested in crippled children would be well advised to see the nursing home of the Crippled Children's Help Society at Rose Hill, Marple, and the other branches of the Society's work.

The full account of the work being done in the city will be found in the *Handbook of Information of the City League of Help.*

S. P. G.

Salford

THE County Borough of Salford has a population of about 240,000, and the town is governed by the Mayor and Council of sixty-four members. It is a great centre of manufacture in connection principally with the cotton, engineering and dyeing industries; and steamers from all parts of the world arrive at the great Salford docks of the Ship Canal.

Professor Tait, in his *Mediaeval Manchester*, records the fact that in the days of Edward the Confessor (1042-1066) the Royal Manor of Salford, of which Manchester formed part, was the centre of the great hundred of Salford; and that, since Henry of Lancaster became Henry IV., Salford has been held by sovereigns as parcel of the demesne of the Duchy of Lancaster. Hence it is that his Majesty King George is lord of the Manor of Salford, that Salford claims to be a Royal borough, and that when the Sovereign's health is toasted in Salford it is, by royal permission, given under the title, "The Lord of the Manor of Salford." Domesday Book tells us that "King Edward held Salford," and that "the men of this manor . . . were not bound by the custom to work at the King's hall, or to mow for him in August."

The ancient town received its first Charter nearly seven hundred years ago, in the reign of Henry III., from Randolf, earl of Chester, whereby, about 1230 A.D., fifteen years after *Magna Charta*, it was made a free borough. The document is preserved in the Town Hall, and among the witnesses' signatures may be read that of the famous Simon de Montfort. A further interesting link with that ancient period is supplied by the continued persistence of the Pendle-

ton Maypole, which is a local survival from the thirteenth century. Abundant evidence of the remote occupation of the district by neolithic man, *circa* 2,000 B.C., has been collected from many parts of the town. The Charter of Incorporation of Salford as a County Borough was granted by the Heralds' College in 1844.

Among Elizabethan buildings of interest are Ordsall Hall, the ancient home of the Radcliffes, and the Bull's Head Inn, Greengate, close to Exchange Station, Salford. The high and undulating ground upon which a large part of the town stands, to the west and north of the city, makes it a healthy and desirable place for residence. In the neighbouring valley, the river Irwell winds through the green fields and sylvan slopes of the borough, and abounds with fish. The town is amply provided with well-kept parks and open spaces, Buile Hill Park, Eccles Old Road, with its extensive swards and noble trees, being, perhaps, the most attractive, affording from its elevated position an extensive view over the plains of Cheshire. The Salford Natural History Museum, in that park, is rapidly developing in public usefulness, and is systematically used by the education authorities, upwards of 7,000 children visiting it in classes during the year. A Foucault's pendulum may be seen there.

In the Peel Park are the Museum and Art Galleries, containing extensive collections of paintings and sculpture, pre-historic antiquities and ethnographical collections, gold and silversmith's work, antique furniture, pottery and porcelain, besides a collection of objects and drawings illustrating local history from neolithic times onwards. Systematic use for educational purposes is made of this as of the other Museum. The town is well supplied with Public Libraries and Reading Rooms, these numbering ten in all. The Reference Library at Peel Park, established in 1849, was the first free library established by a municipality in the kingdom.

The Royal Technical Institute, Peel Park, holds a prominent position in technical education in the country, and provides instruction for a large number of students not only from Salford but from many surrounding towns. **B. H. M.**

Manchester Cathedral

IN 1311 John de la Warr succeeded by marriage to the lordship of the manor of Manchester. In 1399 the direct male line again failed, and the Barony came to Thomas de la Warr. He was a priest, and since 1373 had been Rector of Manchester. In 1421 he obtained for two hundred marks a licence from Henry V. to collegiate the Church. The Charter, creating a Master or Warden, eight Fellows, four Clerks and six Choristers was granted in 1421, and the first Warden, John Huntington, was appointed in 1422. John de la Warr erected a residence for the college on the site of his own manor house. It is now Chetham's Hospital.

In the reign of Edward VI. the College was suppressed, and its property including the residence confiscated.

Queen Mary by a new Charter restored it. In Queen Elizabeth's reign it was remodelled by a third Charter: the old dedication to St. Mary, St. Denys, and St. George was changed: it was made "the college of Christ," and consisted of a Warden, four Fellows, two Chaplains or Vicars, and "four Laymen and four boys skilled in music." In Charles I.'s reign a fourth Charter was granted, making it "the College of Christ in Manchester founded by King Charles." By this Charter it is still governed. In 1840 an Act of Parliament changed the titles of all the colleges of "peculiars" to Dean and Canons: but an order in Council preserved to Manchester all its privileges and exemptions. The Bishopric of Manchester was founded in 1847, and the Collegiate Church then became a Cathedral.

From the evidence of the stones uncovered during the great restoration begun in 1882 it is believed that the Saxon church lasted till the thirteenth century, and that in 1422 the Church consisted of a Curvilinear Decorated Chancel and Lady Chapel, an Early English Nave and Aisles, and a Curvilinear Decorated Western Tower. Warden Huntington (1422) built a new Choir, and Warden Langley (1465) built a new Nave, both in the Perpendicular style. In 1485

Warden Stanley also Bishop of Ely took down the whole northern arcade and moved it three feet to the north to make room for the present Choir Stalls. The Choir Stalls, the Chantry Chapels and their screens, and the octagonal Chapter House were erected in his time. He also remodelled the Clerestory. The pillars and arches of the nave date from Langley's time, but it appears to be mainly on the lines of the thirteenth century church. The arch into the Lady Chapel with the pillars and responds adjoining, and the arch into the tower are probably parts of the earlier church.

With the exception of the Baptistery and porches, which are modern, and of the screens that formerly separated the Chantries from the Nave and from one another which have perished, the restored building substantially reproduces the church as its fifteenth century builders left it.

The Choir Stalls are said to be some of the most elaborate and beautiful in Europe. They were erected in 1485. The south side are all the same, and were given by Bishop Stanley. The north side have five different patterns in their tracery, and were given by a Manchester merchant named Bexwiche or Beswick.

On the Dean's Stall is carved the story of the child of the Stanley family carried off by an eagle. Many of the carvings under the *Misereres* are quaint and interesting.

The carved screens separating the Choir and Chantries with their delicate tracery and beautiful wreaths are worthy of notice. The altar rails and the iron screens which separate the eastern portion of the Choir from the Choir Aisles are of splendid iron work and of a strong individuality, and date from the opening years of the eighteenth century; but so far it has been impossible to discover the maker. The ornamentation standing upon the rails above the gates is said by experts to be unique.

Before the High Altar is the brass of Warden Huntington. His grave is in the crypt beneath. He died in 1458. The brass is noticeable not only for the extreme beauty of its lines, but also for the black metal let in to form the almuce over his surplice.

The Reredos is modern: its design embodies the

double dedication of the College and the Church: the former to our Lord Christ, the latter to the "Glorious Virgin," St. George and St. Denys.

The Arch in the South Choir Aisle leads into the Chapter House, which was originally square, but was rebuilt as an octagon by Bishop Stanley.

East of this is the Fraser Chapel with a cenotaph and recumbent statue of Bishop Fraser.

East of the Choir is the Lady Chapel with its ancient arch and beautifully carved screen.

In the arches of the Retro-Choir are two brass chandeliers which serve for "the Christmas lights." They are lighted at dusk every evening from Christmas Eve to Epiphany. These two brass chandeliers are of great interest, because one of them, the one on the north side, which dates from 1695, is the earliest known example of its kind in England. Chandeliers of this pattern date from 1710 to 1740. The chandelier on the south side dates from 1713.

To the north of the Choir is the Derby Chapel with its delicately carved screens. In it is a beautiful carved altar with copper candlesticks. This altar is said to be of Franco-Belgian make. It is probably in its original state, and it dates from the beginning of the seventeenth century. The copper candlesticks are said to have been made in Sheffield between 1780 and 1800. From their unusually large size it is probable that they were made for altar candlesticks. And in 1626 one George Chetham left a bequest for candles, and his widow left a later bequest for the same purpose. On the north side of it lies the Ely Chapel, where Bishop Stanley is buried. In the Ely Chapel also is the organ built by Father Smith; the order is dated, Feb. 6th, 1682.

From the entrance to the Derby Chapel a fine view of the pillars in the Nave can be obtained. The angels and the bosses of the roofs are the originals, and one of them is said to be unique—the one next the Choir Arch on the north side, an angel playing on a "clavicymbal."

The stained glass is all modern; what little ancient glass remains is in one of the windows of the Chapter House.

The ancient Communion Plate includes two Eliza-

bethan Chalices and two of the reign of Charles I, besides other interesting chalices and jugs.

The Cathedral can seat a congregation of 2,000 west of the screen. On great occasions when the whole building is seated and used 3,500 can be seated and can hear. J. J. S.

The University of Manchester

THE first proposal for a University at Manchester was made in 1641 on the eve of the Great Civil War, but the moment was unpropitious and the suggestion was not revived until the end of the eighteenth century. Then also little direct result followed, yet there arose from this second effort more than one institution for the advancement of knowledge, which was incorporated with the University of a century later.

A more fortunate beginning was made in 1851 by the opening of the Owens College in a house in Quay Street, previously the residence of Richard Cobden, and now the home of the Manchester County Court. Its founder was John Owens, who, dying in 1846, left nearly £100,000, to trustees to establish a college for instructing "young persons of the male sex, not less than fourteen years old" in "such branches of learning and science as are or may be taught in English universities," subject to the conditions that no religious tests should be demanded and that "no religious instruction should be given which was reasonably offensive to the conscience of any student." The generous execution of these stipulations by the chairman of the trustees, George Faulkner, gave the new institution a good start, and secured for it from the beginning the services of distinguished teachers. Yet many difficulties had soon to be faced. Its students were few, young, and ill-prepared; its resources were inadequate; its building located in a squalid and noisy slum. In 1858 the chief local newspaper pronounced the college a "mortifying failure."

In the darkest days there were a few who never despaired. When the tide turned in the early sixties they had their reward. In the twenty succeeding years Owens College established its reputation by the

prominent position taken by its teachers in the realms of learning and research, by the success of its students in London University examinations, and by the clever boys who went from its class-rooms to gain distinction at Cambridge. In 1873 the removal of the college to its present site on the Oxford Road, marked the beginnings of a new development, further promoted by the incorporation with it of the local School of Medicine in 1872 and of the Manchester Museum in 1869. Under the new conditions it became possible to erect laboratories for the study of the natural sciences with an equipment hitherto unknown in this country.

This steady growth resulted in a new movement for a Manchester University. The demand, formulated by a group of professors, in 1875, met with much opposition. The belief that the essential function of a University was examination was widely spread. It was said that it was unbecoming to "brand your own herrings;" that it was better to be the greatest of colleges than the smallest of universities; that the value of the degrees of a local university would be small as compared with those of a "metropolitan" institution; that it was the function of Owens to prepare for Oxford and Cambridge rather than to set up an indecorous rivalry with those institutions, and that neighbouring towns had, or might have, colleges of their own which would be unfairly handicapped.

The struggle went on for five years before it attained success, and even then the promoters, perhaps unwisely, accepted a compromise. They abandoned the original scheme of turning Owens College into a university, in favour of a university with no local name consisting of colleges in different towns. Though such an organisation was essentially an examining board, it claimed that it was a "teaching university" because it only examined the *alumni* of its constituent colleges. In the charter of 1880 these conditions were embodied. Some concessions were made to the Manchester point of view by calling the new institution the "Victoria University, Manchester," by establishing its seat in that city, and by making the Owens College its first college. To it were subsequently added University College, Liverpool, in 1884, and the Yorkshire College, Leeds, in 1887.

The federal University of Manchester lasted from 1880 to 1903. It did useful work in stimulating interest, raising standards and widening curricula. It excluded from the University the boy students of the earlier days of Owens, and by opening degrees and offices to both sexes gradually forced, on the somewhat conservative college authorities, the admission of women to all courses and offices. Moreover, in those experimental days there was real usefulness in the bringing together the members of the constituent colleges, and in the inevitable competition that followed. But it was not, and could not be a real university. Its professors and lecturers deliberated as examiners, not as teachers, still less as investigators. It excited no corporate feeling; it depressed local interest; it made the necessities of the least efficient elements the standards of corporate action.

In 1900 a University with resources inferior to those of the Owens College of 1880 was established at Birmingham. This rang the knell of the federal university. Liverpool raised the standard of revolt; Leeds strove in vain to uphold the charter of 1880; Manchester, after a moment of indecision, threw its weight on to the separatist side. After a fierce fight the disruptionists prevailed. In 1903 new charters were issued, one of which set up a University of Liverpool, while the other continued the Victoria University with a revised constitution, and the title of "the Victoria University of Manchester." In 1904 Leeds also had its University, and the incorporation of Owens College with the University by act of parliament destroyed the unnatural separation of "college" and "university" that had characterised the federal system. Manchester again suffered a little from compromises. The legal continuity of the Manchester University with the Victoria University of 1880 had advantages, but involved the inconvenience of a cumbrous title. In practice, however, there arose an increasing disposition to use the legal phrase only on such formal occasions as those in which the University of Heidelberg is called *Universitas Ruperto-Carolina*. The title Owens College, preserved as the legal designation of the then existing buildings, must, despite its hallowed associations, slowly fall into disuse.

The thirteen years of life of the reconstituted University has justified the claims of its founders and shown how illusory were the fears of its opponents. It is now larger, wealthier and stronger, more progressive in education, more active in research than the whole federal university. Its prosperity has been the less invidious since its former allies have made such progress that they are much more comparable with it than at the moment of disruption. The development of these years is only partially indicated by the increase of the professoriate from thirty-five to fifty, the growth of the number of students from 1,000 to 1,700, and the expansion of annual corporate income from £40,000 to £80,000, which sum would almost be doubled if we added to it the separate expenditure of allied institutions, co-operating with it in university work but possessing separate budgets and management. Its growth comes out strikingly in the enormous extension of the academic buildings far beyond the narrow limits of the Owens College of 1902, so that between the School of Technology in Whitworth Street, and the Hospitals, Athletic Grounds and Halls of Residence, extending three miles into the suburbs, south Manchester has been gradually changing into a true Latin Quarter. It is conspicuous also in the increase of its advanced work, and in various bold and successful experiments of absorption and extension.

The new charter subdivided the university into Faculties, and a review of its work faculty by faculty suggests its chief developments. The earlier activities of Owens College are represented by the faculties of Arts, Science, Law, Medicine and Music. Two of these, Law and Music, are much smaller in size and less intense in their operation than are the three great faculties of Arts, Medicine and Science. The unhealthy centralisation of the English legal system in London makes all academic education in law difficult, and severely handicaps a university far removed from the centre of professional activity. Though from the beginning names of great eminence have been associated with the law school, few endowments have flowed into the legal department, and after sixty years of work it at present includes only one professor and its energies are mainly directed towards preparing a fair

number of young barristers and solicitors for the LL.B. degree. If the faculty of music is still smaller than that of law, its numerical insignificance is due simply to the fact that students of music rarely aspire to academic degrees. But the faculty of music owes its chief strength to its being in effect the academic side of the Royal Manchester College of Music, whose institution in 1893 has immensely raised the standards of musical education in the north of England.

From the first beginnings of Owens College, the traditional education in the humanities has been strongly upheld. In early days it was reproached for laying unpractical stress on "ancient learning." Its original students were too young and too unprepared to make specialisation of any sort either practical or desirable, and the bondage of the London curriculum provided in the next generation an equally formidable obstacle. Real progress began with the Victoria honours schools in arts, but under federalism the most popular of these barely maintained a succession of two or three students a year. At first the enormous development in science rather overshadowed the growth of arts, but ten years later the two Faculties attained substantial equality in numbers. The arts staff also was greatly strengthened; for instance, the professoriate in classics increased from two to four, and that in history from one to four. For the first time serious post graduate study was systematically pursued by considerable numbers of students. Under these conditions the accommodation for the Faculty became quite inadequate for its needs. At the present moment a noble new building is being constructed in Lime Grove for the Faculty of Arts. In this, every department will have a "home of its own," like the laboratories of a branch of natural science. Each will possess separate lecture rooms, studies, and seminar rooms appropriated to itself, so that it is believed that in the near future the studies of the Faculty will be pursued under exceptionally favourable conditions.

The origins of a Faculty of Medicine go back to the foundation of the Manchester Infirmary in 1752, and to the beginnings of systematic medical education in the Pine Street School of Medicine in 1824. It was not, however, until 1872 that the Manchester

School of Medicine was incorporated with Owens College. Moreover the University, set up in 1880, was only empowered to give degrees in medicine and surgery after three years of vexatious delay. However, the school flourished so much that it was found necessary some ten years later to add largely to the buildings assigned to it, and in 1909 the opening of the new Infirmary on a site closely adjacent to the University enormously improved the hospital facilities available, the more so as the Infirmary became the centre of a large group of neighbouring clinical institutions. In Manchester, medical education is divided between the University Faculty and the Royal Infirmary and various special hospitals (see later pages 55 to 58), which are responsible for clinical instruction. The organic relations between the societies representing the academic and professional points of view are not of the closest, though both are staffed by the same men, and each avowedly aims at supplementing the other. It is natural that each body should jealously preserve its long traditions of independence. It is certain, however, that the two points of view are more closely blended here than in many other schools, and that they in no wise impair the effectiveness of our magnificent appliances for medical education and investigation. Among these may also be specified Schools of Dentistry and Pharmacy, and the important Public Health Laboratory.

From the earliest day of Owens College the Faculty of Science has played a leading, and often a pioneer, part in the erecting of laboratories, the training of specialists, the organisation and conduct of research, and the setting up of academic schools of chemistry, engineering, physics, and natural history. In this it has shown the way to other universities, old and new, which have followed in its footsteps. When the beginnings of the present chemical and engineering laboratories were established in Oxford Road, they were unique of their kind. In five and thirty years they have been developed enormously. The chemical laboratories have been extended on the existing site. The engineering workshops have recently been re-erected on a larger scale north of Burlington Street. Immediately to the west have arisen the great physical

laboratories of 1900, which in their turn have also been largely extended. They now face the spacious botanical laboratories completed in 1911. By these changes ample space has been left within the old premises for zoology, geology, mathematics and other scientific departments.

The result of all this activity, and the good fortune of the University in attracting professors of great eminence to direct its studies was, that for many years the Manchester schools of chemistry and engineering enjoyed something like a monopoly. If this has now passed away, these schools hold their own with undiminished prestige and increased numbers, and still play their part not only in the study of pure science, but also in the technical applications of science to industry. The other scientific departments, though necessarily attracting smaller numbers than these semi-professional schools, have in no wise fallen short of their ideals. The work of the physics department has been long recognised as of exceptional importance to the whole academic world. Closely related to the faculty is a school of agriculture which is associated for practical work with the Cheshire Agricultural College at Holmes Chapel.

The development of the Faculty of Science has not been checked by the establishment of a Faculty of Technology to which has naturally been assigned most of the technical applications of science of which the Faculty of Science hitherto had had sole cognisance. The discussions of the spheres of pure and technical science suggest to a historian the attempted definitions by mediæval publicists of the spheres of church and state. In both relations alike the difficulty has not so much been in theory, as in the practical efforts at limiting the frontiers of the rival authorities, as to which many conflicts have arisen. The solution of the more modern problem arrived at in Manchester by the constitution of two separate faculties may not be a perfect one. It has at least the merits of bringing about a working agreement. Some overlapping doubtless results, but when dealing with the less advanced studies of large numbers of students this does more good than harm. In more specialised teaching there remain some duplications of the work, notably

as regards engineering, which might be adjusted with advantage. The situation is complicated in Manchester by the fact that, though its schools of engineering, chemistry and physics necessarily treated of the applications of those sciences, the general problem of technical education was rather left in the background by the Owens College of the past. Room was thus left for the work of the Manchester Mechanics Institute (1824), a body which, taken over by the municipality, gradually developed into the Municipal School of Technology. The projectors of the School of Technology aimed at discharging two different functions. One was the provision of technical instruction, largely by means of evening lectures, to thousands of craftsmen and apprentices (see page 77). The other was the highest possible education in the technical applications of science needed by a limited number of future organisers and directors of industries and the equipment of investigators of technical problems. The opening of the sumptuous buildings in Whitworth Street in 1902 coincided with the reconstitution of the University. The Municipal School was equipped and financed on so generous a scale by the corporation that its gross annual expenditure approaches £50,000, that is five-eighths of the corporate revenue of the University. An institution, modelled on the Massachusetts Institute of Technology, or the Technical High Schools of Germany and Switzerland, might well, if working in isolation from the University after the German fashion, have produced costly and barren rivalry. If brought into relation with it, it could not but add materially to the prospects of Manchester possessing unrivalled equipment for all technical studies. This aim is the more essential in view of the fatal policy sometimes advocated of centralising the highest technical work of the whole country in a single institution.

A way out of the difficulty was foreshadowed by the direction in the charter of 1902 that there should be a Faculty of Technology. Such a faculty was instituted in 1905 and was based upon the more academic side of the Municipal School, which thus became the only English institution of university rank, financed and controlled by a local Education Authority. Ten years working has in the long run shown that the

difficulties, feared on both sides, prove decreasingly formidable in practice. Already its University students approach in numbers those of the three largest faculties of Science, Arts, and Medicine. But perhaps an even more satisfactory result of the policy of combined effort is to be found in the Manchester School of Architecture, controlled by a joint Committee representative of the City, University, and the architectural profession, working alike in the Schools of Art and Technology and in the old University buildings without any overlapping whatever. It is under a single direction and related to the Faculty of Arts as well as to that of Technology.

Two other faculties were constituted in 1904, soon after the reconstitution of the University. Of these, the Faculty of Theology was the completion of schemes which had been unsuccessfully brought forward in the federal university. It rigidly refuses to impose any test or ask any question as to religious belief. It is therefore entirely "scientific" and "undenominational" in character. It differs, however, from the undenominational faculties in Wales and London which limit themselves to examination and hand over all teaching to affiliated denominational colleges. The Manchester Faculty has provided a staff of theological professors and lecturers and insists that half the instruction shall be given by them on the University premises. It has, however, associated with itself the seven Manchester theological colleges, representing as many Christian denominations, and has assigned to them the sole teaching of dogmatics as well as a portion of the general instruction in less burning subjects. The harmonious working of theologians of very varying standpoints has entirely belied the fears of those who were alarmed at the new departure. By limiting access to its degrees to graduates it has maintained a high standard of general education at entrance.

The Faculty of Commerce and Administration is up to the present more a faculty of commerce than of administration. It is based on the belief that the theory of business and the conditions underlying it are as capable of academic treatment as any other subject. A special feature in its scheme is an arrange-

ment by which students can graduate by attending evening classes of the same type as day classes. Though only in operation eleven years, its graduates include three of the four university teachers of economics.

The young Faculty of Education, instituted in 1914, owes its establishment to the development of pedagogic study which began with the foundation of the "Day Training College" in 1890, and of a technical preparation for secondary education somewhat later. Its effect is to postpone courses in education until after graduation in science or arts, so that the Faculty deals with mature work, whether it is concerned with training in the technique of the teachers' craft or with the investigation of the principles underlying it. Its laboratories are the Fielden Practising School and the chief schools of the neighbourhood.

A sketch of University activities, faculty by faculty, leaves out the important points at which the faculties overlap or supplement each other, as well as those vital aspects of academic work which concern the University as a whole. Not only are some subjects rightly shared between various faculties, such as mathematics betwen science and arts, applied science between science and technology, architecture between arts and technology and so on. There are many matters outside the purview of a faculty, and many others which relate to all alike. The University Library is essential for all faculties, though for some, such as arts and theology, it is doubly important as a laboratory as well as a collection of books. In a city of great libraries like Manchester, the University library, though even now not quite complete for its purpose, is worthy of being named along with the magnificent stores of books in the John Rylands Library (see page 60), the Chetham (see page 54), and the Municipal Reference Libraries (see page 58), all of which, especially the John Rylands, afford indispensable instruments of work for humanistic studies. Of equal importance to the faculties concerned with the natural sciences are the Manchester Museum, and the venerable Literary and Philosophical Society, both of which are treated at length in a later part of this book (see pages 51 & 90). A similar function

is discharged by many other scientific and learned societies in the town, among which its seniority may permit a special mention of the Chetham Society for publishing works and documents relating to local history. Returning to University institutions, the University Press, under the entire control of the Publications Committee of the Council, has issued between 1904 and 1915 about 150 works of learning, research and education. Thus the University Press not only affords a special literary outlet for its teachers and students, but gives Manchester for the first time a place of its own as a publishing centre.

It has been made a reproach to the modern University that it is a place for attending lectures and conducting investigations rather than a corporate and social entity. It may be claimed for Manchester that very abundant facilities have been provided to build up the University as a corporate whole and develop its sense of unity and public spirit. Social life is fostered by the two University Unions for men and women respectively, for which spacious and well-equipped clubs have been erected, adjacent to the Refectory, an institution open to all members of the University. The activity of the two unions has become so wide that they have absorbed the functions of the Students' Representative Council. These are now performed by joint committees of the unions for academic and for social purposes and for editing the University Magazine. The social committee organises university soirées and dances, and entertainments for the college servants. Other general needs are provided by such associations as the Musical and Stage Societies, which give serious concerts and dramatic representations (see page 102), the Christian Unions for men and women, the Sociological Society, and many others. Besides these each active department or honours school has its specialised society. Far from lacking social opportunities, an energetic student with a touch of perversity could spend all his or her time in organised social effort.

Physical recreation is provided in the University by the Holt Gymnasium, and by two Athletic Unions for men and women students respectively. With these are incorporated the various clubs which in

PLATE 7.

THE CHETHAM HOSPITAL.

THE DINING HALL.

normal times of peace take advantage of the spacious athletic grounds at Fallowfield with its well-equipped pavilion. Latterly, many social and most athletic activities have been suspended by reason of the war. The national peril has brought into great prominence the Officers Training Corps, which has already sent out some 500 commissioned officers to join the King's forces and which still remains in full and active operation as a school for officers. To facilitate its work all lectures were suspended on Wednesdays and Saturdays during the last session. Nor is this the only contribution of the University to meet the present crisis. An imperfect list of members of the University serving in the army and navy, compiled in February last, contains over 700 names. This catalogue has since been very largely amplified. To those directly engaged on active service must be added hundreds of others of both sexes, taken, wholly or partly, from their normal occupations by the war. But there is no need to dwell on what is now general in every university in the country.

The University appreciates its obligations to the vast population amidst which it is placed. In its earlier days Owens College classes for evening students were an important side of its work, but latterly this function has been mainly abandoned to the Education Committee and other bodies (see page 74). Apart from the evening classes of the School of Technology, with which the University has no direct concern, there now remain only a few evening classes. When practicable, occasional students are admitted to the day classes of the University. For extra-mural teaching there are also University Extension lectures, and of recent years the University has taken a large share in organising and teaching, and some in financing, numerous local tutorial classes, given under the auspices of the Workers Educational Association, the most hopeful movement of recent times for the diffusion of popular education. Moreover, the University Settlement in Ancoats has now been working for more than twenty years on educational as well as on social lines. A survival of the federal period is the Joint Board of the four Northern Universities, which meets in Manchester, and has done

good work in standardising and controlling the Matriculation Examination of all the four Universities. It has also instituted a school leaving examination. The effect of the Joint Board's work on the schools of the north is consequently considerable.

The new universities are sometimes described as "local," "civic," or "provincial." The third epithet hardly admits of definition, but all universities are local and civic in the sense that they are established in a place and generally in a city, and naturally receive special support from their neighbours. When, however, a university draws its students, as is the case in Manchester, from every corner of the empire and even beyond it, the disparaging suggestion involved in these descriptions loses its sting. One result of university activities having neither a local nor a civic limitation is the need of providing for the residence of students coming from a distance. One method of attaining this object in Manchester is by halls of residence, in which students may live a common life under supervision and direction. At present there are five such halls, three for men and two for women students. They are adequately equipped, and some are established in buildings of real artistic merit. They are under independent management, but are licensed by the University, and are subject to some measure of University control. There is still room for more such hostels, which are an important, though by no means the sole, means of building up the corporate life. Less costly halls of residence, and halls for senior students with a minimum of direction and a maximum of self-government would be particularly welcome.

The University of Manchester is not solely or mainly concerned in "bread studies" and practical aims, but fosters science and learning for their own sake. It is not a University of colleges. Neither the colleges affiliated to special faculties, such as the theological colleges; nor the halls of residence; nor even the great School of Technology, a faculty in itself, can be properly envisaged as colleges of the University, in the sense in which that term is used, either in Oxford or in London. The ideal of academic unity has survived all the reconstitutions and incorporations

that have from time to time been brought about, and is as vital as the ideals of the extension of knowledge and of training for the service of the community. Those engaged in the work of the University know best how far it still falls short of their aspirations. But they comfort themselves with the conviction that a society which has accomplished so much in the past can look forward confidently to the future. The building up of a new University is never an easy task, and in England is beset with special obstacles. They are best met by those inspired by a lively imagination and faith in the mission and future of the movement which has in recent years already more than doubled the number of the Universities of England. The University of Manchester is satisfied if it be judged to have made some contribution to this task.

T. F. T.

The Manchester Museum

THE first Manchester Natural History Museum was situated in Peter Street on the site now occupied by the buildings of the Young Men's Christian Association, and was the property of the Manchester Natural History Society, founded in 1821. The collections formed by this Society, together with those acquired by the Manchester Geological Society, founded in 1838, furnished the nucleus of the present Manchester Museum. In 1869 these collections were combined under the management of a Museum Trust. and in 1873 were handed over to the Council of Owens College, who undertook to hold them in trust for the benefit of the public of Manchester. The conditions of the transfer were, speaking generally, that the Owens College should house and maintain the collections and give the public access to them on three days in each week free of charge, and in addition, that lectures, free to the public, should be given from time to time in connection with the Museum. At the same time, a sum of about £14,000, mainly derived from the sale of the site of the old Natural History Museum, in Peter Street, was handed over to the Council of the Owens College in trust for

the use of the Museum. The trust was accepted by the Council on these conditions, and the Museum, in its new home, has always been known as the Manchester Museum. The main Museum buildings were not completed and opened till 1888. The buildings, erected by public subscription, aided by a donation of £27,500 from the Whitworth legatees, at a cost of £75,000, were designed by Mr. Alfred Waterhouse, R.A., as a special wing of the Owens College fronting Oxford Road. The completed but still unfurnished building was used as the Reception Room of the British Association during its meeting in Manchester, in 1887. In 1912, an extension of the Museum, provided mainly through the generosity of Mr. Jesse Haworth, was opened for the accommodation of the extensive and important collections of Egyptian antiquities accumulated during a period of twenty-five years.

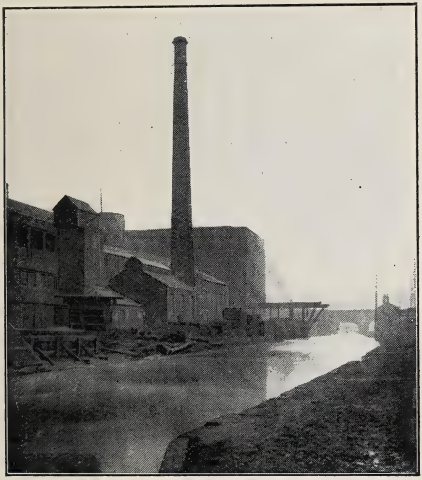
The Museum is under the management of a Committee, appointed in accordance with regulations drawn up by the University Council, consisting of certain members of the Manchester University Staff *ex-officio*, representatives nominated by the Council of the University, the Manchester City Council, and the subscribers to the Museum funds, together with certain co-opted members.

The lines upon which the Museum work is conducted are intended to be as broad and liberal as possible. It takes cognisance of Natural History in a wide sense, with special reference to Mineralogy, Geology, Zoology, and Botany, and includes Archæology, especially Egyptian Archæology, Anthropology, and Numismatics.

The ground floor of the Main Building consists of a large room devoted to the exhibition of the fossils from the Primary and Secondary formations arranged stratigraphically, and a smaller room at one end, where the mineralogical, petrological and general geological collections are displayed. The grand staircase, which also serves as an approach to the Council Chamber of the University, ascends to the first floor, where there is a room of the same dimensions as the one beneath, but furnished with two galleries running its full length. On the east side of this floor are

FRANCIS,
THIRD DUKE OF BRIDGEWATER.

JAMES BRINDLEY.



AT PATRICROFT.

THREE GREAT FACTORS IN COMMERCIAL PROGRESS.

The Duke of Bridgewater's first Inland Navigation system, crossed by the first Liverpool and Manchester Railway. At the intersection stands the Nasmyth Steam-Hammer Works.

PLATE 8.

arranged the collections from the Tertiary deposits, on the west side, the Mammalia. The first gallery contains the remainder of the Vertebrata, and the second the Invertebrata. The Botanical collections occupy two rooms, of the same size as the mineralogical room on the ground floor, leading off the first and second galleries. The main building communicates with the recently opened extension by a bridge at the level of the first floor and approached through a room devoted to the exhibition of flint and stone implements. The ground floor of the new building consists of two rooms, the large one occupied by the collections illustrative of Economic Geology, and the smaller one by part of the Anthropological and Coin Collections. The whole of the first floor and gallery are given up to the collection of Egyptian Antiquities.

The Museum is now the home of many important collections, which cannot be enumerated here in detail, but among which may be mentioned the "Dresser" Collection of Palæarctic Birds and their Eggs, the "Cosmo Melvill" Herbarium, the "W. S. Churchill" Collection of European Coins and Medals, the "Darbishire" Collection of Flint and Stone Implements, and the "Schill" Collection of Lepidoptera. The Collection of Egyptian Antiquities is among the best in the country, while the Collection of Mollusca, mainly through the close association of the Museum with the Conchological Society of Great Britain and Ireland, is amongst the most complete outside London. The Museum has its own separate Library, which now comprises about 14,000 books and pamphlets.

The Museum is open to the public every weekday from 10 a.m. to 5 p.m., on Sundays from 2.30 p.m. to 4.30 p.m., and on the first Wednesday evening of every month from 7 p.m. to 9 p.m.

In the course of the year some forty lectures and demonstrations, free to the public, are delivered in connection with the Museum.

A new edition of the Handy Guide to the Museum is in course of preparation, and will be published in time for the Meeting of the British Association.

W. M. T.

Chetham's Hospital and Library

THE venerable pile of buildings known as Chetham's Hospital and Library, is situated opposite the Cathedral, and is approached through a gateway surmounted with the arms and motto of the founder, Humphrey Chetham (see page 4). The building on the site of the manor-house or castle of the lords of Manchester was erected after 1421 by the then lord Thomas de la Warr, as the residence of the Warden and Fellows of the Collegiate Church he established here in that year. They held it until 1547, when, on the dissolution of the College, it was granted to Edward Stanley, Earl of Derby, by Edward VI., and in that family it remained for nearly one hundred years.

On the re-founding of the College by Queen Elizabeth, the then Earl allowed the famous Warden, Dr. Dee, the use of it.

During the Great Rebellion it was seized by the Sequestrators on behalf of the Parliament, and by them put to various uses, such as a barracks, a powder magazine, and a conventicle, and allowed to fall into decay.

Soon after the Restoration, therefore, when the property had returned again into the hands of the Derby Family, it was sold to the Governors appointed under Chetham's Will, by the celebrated Charlotte de Tremouille, Countess of Derby.

The Governors are a corporate Body under a charter granted by King Charles the Second, dated 10th November, 1665.

The directions of the Founder were that the Institution was for the maintenance and education of the sons of poor, honest and industrious parents, to be selected from the townships of Manchester, Salford, Crumpsall, Droylsden, Bolton and Turton, and at present one hundred such boys are maintained in the Hospital. There are two elections during the year—at Easter and at Michaelmas.

Since the foundation upwards of 4,000 boys have been housed, fed, clothed and educated and given a good start in life.

What alterations the buildings may have undergone either in its internal or external appearance, since its original foundation, it would be difficult at this period, precisely to ascertain. It still, however, presents very striking marks of antiquity, and exhibits all the characteristics of the architecture of Collegiate Buildings of the fifteenth century. Considerable internal changes were involved in its adaptation to the purposes of a library and school in the seventeenth century.

The ancient hall or refectory, the lofty kitchen, the combination room or minor hall and the reading room are of special interest to the visitor; but the most characteristic remains of the original building, are the Cloisters which surround a small court and give an air of venerable antiquity to the whole.

The Library was founded at the same time as the Hospital, and is recognised as the oldest public free Library in England.

£1,000 was bequeathed for the purchase of books, and £100 to house them, for the augmentation of which Chetham devised the residue of his personal estate after the payment of certain legacies. It is freely open to all comers, whether resident or not, and contains about 70,000 books and MSS.

The collection is exceedingly valuable, being rich in works of Local History and Topography; Theological and Antiquarian Literature; and excellent works on Art and Natural History. It also contains many fine manuscripts.

It is open to the public during the usual hours for purposes of reference and consultation.

W. J. F.

The Medical Charities of Manchester and Salford

MANCHESTER is well supplied with hospitals, both General and Special, and has also a number of other institutions of a charitable character where the aid and relief given is of a medical or surgical nature; the following is not an exhaustive list, as little more than enumeration of

the more important institutions can be given in the space available.

The Manchester Royal Infirmary, the most important and oldest institution for the treatment of the sick and injured, is also one of the oldest provincial hospitals; it was founded in 1752, and at first housed in Shudehill. In 1755 it was removed to a new building erected on the now vacant Piccadilly site where it remained until 1908 when, enlargement having become imperative, it was removed to the present site of thirteen acres, in Oxford Road, where accommodation is provided for 600 patients.

In 1766 a wing for the treatment of lunatics was added and remained until 1847 when this part of the institution was removed to Cheadle and formed the nucleus of the Cheadle Royal Lunatic Asylum, which is still managed by the Infirmary Board.

In 1796 a "House of Recovery" for contagious fevers was added and remained until 1870 when it was removed to the northern suburb of Monsall, and some years later enlarged and taken over by the City as a Municipal Isolation Hospital, it now contains 600 beds.

In 1867 a convalescent home was established at Cheadle, and the present Barnes Convalescent Home, with 136 beds, was erected there in 1875.

The New Royal Infirmary, in Oxford Road, is one of the finest of modern hospitals with provision for 592 beds. It comprises 48 blocks of buildings and includes ample accommodation for the needs of the medical school, laboratory for pathological investigations and nurses' home.

A well-equipped X-ray department is a special feature, and this year has seen the establishment of a Radium Department for Manchester and the surrounding district, which is housed in the basement of the Infirmary; a sum of over £30,000 was publicly subscribed for this purpose in 1914. A new central branch was completed this year, in Aytoun Street, for the treatment of accidents and out-patients.

Salford Royal Hospital, in Chapel Street, was founded in 1827, and beds provided in 1845. It has been enlarged, and now contains 208 beds. There is a branch Dispensary in Pendleton.

Ancoats Hospital, in Mill Street, Ancoats, began as

the Ardwick and Ancoats Dispensary in 1828, and was converted into a General Hospital in 1871; later extensions have provided 114 beds and a convalescent home at Warford.

Victoria Memorial Jewish Hospital, Cheetham Hill, was established in 1904, it contains 40 beds and is open to patients of all creeds and nationalities.

St. Mary's Hospitals for Women and Children. The original St. Mary's Hospital was founded by Dr. Charles White, in 1790, and until 1903 was housed in Quay Street, in a building erected in 1855, by the late Dr. Radford. In 1904 an amalgamation was effected with the Manchester Southern Hospital for Women and Children, and two new hospitals were built. One of these at the corner of Oxford Road and Whitworth Street West is used as a Maternity Hospital and out-patient department, it contains 56 maternity beds and 50 cots, with accommodation for medical students, midwives and pupil nurses. The other hospital, in Oxford Road, contains 115 beds for gynæcological cases, and children.

The Northern Hospital for Women and Children, Cheetham Hill Road, was founded in 1856, and contains 70 beds.

The most recent additions to the Manchester Hospitals is the "Babies' Hospital," largely the outcome of the work of the School for Mothers, it was opened in 1914, in Clarendon Road, for the treatment of babies suffering from malnutrition (see pages 19 & 20).

The Manchester Children's Hospital, founded in 1829, comprises a large out-patient department in Gartside Street, rebuilt in 1906, a hospital for in-patients with 194 beds, on an elevated site at Pendlebury, and a seaside convalescent home at St. Annes-on-the-Sea.

The Manchester Royal Eye Hospital, Oxford Road, established in 1814, is a fine building, opened in 1886, and since enlarged, it affords accommodation for 160 in-patients, a large out-patient department, and an older building in St. John Street is still used as an additional out-patient department.

The Manchester Ear Hospital, in Grosvenor Square, with 24 beds and an out-patient department, was established in 1855.

The St. John's Hospital for Diseases of the Ear, with

12 beds was established in 1888, in St. John Street.

The Manchester and Salford Hospital for Diseases of the Skin, Quay Street. Established as a separate institution in 1888, the present fine building was opened in 1906, it contains 30 beds, a large out-patient department, and a complete installation for the Finsen light, X-rays and allied methods of treatment.

The Manchester and Salford Lock Hospital, Duke Street, founded in 1818. The present building, erected in 1874, contains 46 beds and out-patient department.

The Hospital for Consumption and Diseases of the Throat and Chest was established in 1875. It has an out-patient department in Hardman Street; an in-patient Hospital, at Bowdon, with 50 beds; and the Crossley Sanatorium, at Delamere, with 100 beds.

The Christie Hospital, Lorne Street, for Cancer and allied conditions was established in 1892 for the treatment and study of these diseases. It has 30 beds, some of which are reserved for incurable cases.

The Hospital for Incurables, Mauldeth Hall and Walmersley House, provides accommodation for 125 patients, and also allows pensions to certain patients who live at home.

The Manchester Dental Hospital, Oxford Road, was established in 1884, and removed to the present handsome and well-equipped building in 1909.

R. B. W.

The Manchester Public Libraries

THE public libraries of the city, founded in 1852, consist of a Reference Library, twenty-four Lending Libraries, a Foreign Library, the Henry Watson Music Library and the Thomas Greenwood Library for Librarians. In all departments the Libraries contain over half-a-million volumes.

The Reference Library, which is housed in a temporary building in Piccadilly, contains 186,187 volumes. It is an excellent collection of books covering every department of knowledge. While other branches of knowledge have not been neglected, the Library

is very rich in books on local trades and industries and in political economy generally. There are special collections, some of them originating from important donations, of books on statistics (including the library of the Manchester Statistical Society), English dialects (including the library of the late English Dialect Society), Gypsies, Shorthand, and Local Topography. The local collection includes printed books bearing on Lancashire and Cheshire history and topography, a fine collection of engraved prints and portraits, original drawings and photographs, several thousands of deeds and other documents, and the Owen MSS. and other valuable manuscripts of historical data. The Specifications of Patents, British, United States, and Colonial, forming part of the Reference Library, are at present located at the Deansgate Library.

The branch libraries are distributed throughout the city and supply the lighter and general reading of the people. Most of them contain from 6,000 to 19,000 volumes, fiction being less than half of the total. With few exceptions the branch libraries are on the open access plan and all are classified according to the Dewey system. Each library has a newspaper and magazine reading room attached, and a number of them have also a reading room for juveniles. In the Openshaw Library there are billiard tables and a room for games. In the Moss Side Library there are special collections of the works of Thomas de Quincey, Mrs. Gaskell and the Brontës, of each of which a catalogue has been printed. The Foreign Library, temporarily kept at the Cheetham Branch Library, contains over 16,000 volumes which may be borrowed for home reading. They are mostly in the French and German languages. The Henry Watson Music Library contains 30,000 volumes and hundreds of thousands of pieces of music. It is a lending library supplying not only individual borrowers but also choral societies, bands, and orchestral societies which may obtain all the pieces required for very large numbers of performers. To the original valuable donation by the late Dr. Henry Watson additions are constantly being made. The Thomas Greenwood Library for Librarians, founded and endowed by the late Thomas Greenwood, is a collection of biblio-

graphical works and books on library economy intended to be used by librarians throughout the kingdom. It contains about 15,000 volumes, and the donor included a few fine specimens of bookbinding and early printing. A collection of books for the blind, commenced in 1862, was some years ago, transferred to the Library of the Blind Aid Society which receives an annual grant from the Libraries Committee.

The Public Libraries are controlled by the Libraries Committee consisting of twenty-two members of the City Council. By local act a rate of 2d. in the £ may be levied. The cost to the rates last year was £35,314, and this year is estimated at £32,152. The Reference Library is open daily from 9 a.m. to 9 p.m. The Lending Libraries are open daily from 8.30 a.m. to 9 p.m.; and the Reading Rooms from 8.30 a.m. to 10 p.m. On Sundays the Reading Rooms are open from 3 to 9 p.m.

E. A.

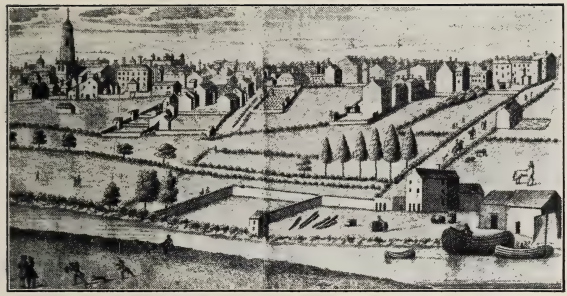
The John Rylands Library

THE John Rylands Library, one of the youngest, but certainly the most famous of Manchester's literary institutions, was formally dedicated to the use of the public on the 6th of October, 1899.

It owes its existence to the enlightened munificence of the late Mrs. Rylands, by whom it was erected, equipped and liberally endowed, as a memorial to her late husband, whose name it perpetuates.

Nine years were spent in the erection of the building, which is regarded by competent authorities as one of the finest specimens of Modern Gothic architecture in this or in any country. Stone-mason, sculptor, metal-worker, and wood-carver, seem to have conspired under the guidance of the architect, Mr. Basil Champneys, to construct a building in every way worthy of the collection of treasures which it was intended to house.

The contents of the library now number upwards of a quarter of a million of volumes, and include several notable collections, foremost among which are the "Althorp Library" and the "Crawford Manuscripts."



MANCHESTER'S FIRST QUAY AND WATERWAY.
ON THE MERSEY AND IRWELL NAVIGATION.
(c. 1721)

THE 'RED' HALL, WORSLEY.
BUILT BY THE DUKE OF BRIDGEWATER.
(c. 1766, demolished c. 1845)

PLATE 9.

It was of the former that Renouard, the French bibliographer, wrote: "It is the most beautiful and richest private library in Europe," whilst another writer described it as: "A collection which stands above all rivalry." Its distinguishing feature is its collection of early printed books, which in point of condition is probably without rival, thanks to the scholarly instincts possessed by the first Earl Spencer, the founder of the library at Althorp, who for something like forty years haunted the salerooms and booksellers' shops throughout Europe, in his eagerness to enrich his collection, with whatever was fine and rare. The Crawford Manuscripts number about 6,000 examples, illustrating the history of writing and illumination in the principal languages and characters of the East as well as the West.

These collections alone give to the library, and to the city, a distinction enjoyed by few others, since they have made of Manchester, not only a place of pilgrimage for the lover of rare and beautiful books, but a centre of attraction for scholars from all parts of the world.

One of the most noteworthy features of the library is the collection of books printed before 1500, numbering upwards of 3000 volumes, and illustrating in a remarkable manner the history and development of the printing-press to the close of the fifteenth century. Commencing with the specimens of block-printing, the immediate precursors of the type-printed book, it is possible to trace step by step the direction which the art of printing took in the course of its progress through Europe.

The collection contains the "St. Christopher" print, with the date 1423, alone sufficient to make any library famous, a number of other block-prints, fourteen block-books, including the "Apocalypsis S. Joannis," the "Ars Moriendi," the "Biblia pauperum," the "Speculum humanae salvationis," the "Ars memorandi," and "Die Kunst Ciromantia;" and specimens from nearly every press of this period. Many of the copies are printed on vellum, and a number are unique. Of the work of England's first printer, Caxton, the library possesses sixty examples, including three which are unique, whilst of others only

one other copy is known, notably Malory's "Morte d'Arthur," and the "Advertisement."

Of books printed at the famous Venetian press, which was founded in or about the year 1494, by the scholar-printer Aldus, the collection is considered to be the largest ever brought together, numbering upwards of 900 volumes.

The classical side of the library is pre-eminently rich, with its remarkable series of "editions principes et primariæ" of the Greek and Latin writers, most of which still retain the freshness they possessed when they left the printer's hands.

Of the great masters of Italian literature there is a considerable collection. The Dante section alone numbers more than 6,000 volumes, and is specially rich in early editions of the "Divina Commedia." The only known copy of the "editio princeps" of "Il Decamerone," printed by Valdarfer at Venice, in 1471, is perhaps the gem of the collection.

The department of English literature comprises not only a very large collection of the original editions of Shakespeare, Chaucer, Spenser, Milton, and Bunyan, to mention only a few of the most famous names; but many copies of outstanding importance, by reason of their personal history.

The collection of manuscript and printed copies of the Bible ranges from the sixth century to the present day, and is amongst the finest extant.

It was inevitable that the possession of so great an inheritance of literary treasures should cause the library to become a place of pilgrimage for those who have given themselves to the service of learning, as well as for the lover of rare books. But from the first it has been the intention of the Governors to make it at the same time an excellent working library for students, whether in the departments of theology, philosophy, history, palæography, philology, belles-lettres, the fine arts, or bibliography, and with this end in view they have consistently strengthened the collections in directions likely to be fruitful of good results, so that students and scholars of riper experience alike should be attracted, not merely by the library's treasures, but also by the facilities which it offers for study and research.

Members of the British Association are invited to visit the library during their stay in Manchester, and to examine for themselves the selection of manuscripts and printed books which have been displayed in the exhibition cases in the main library, or to make use of it in any other way.

H. G.

The Manchester Grammar School

THE Manchester Grammar School, which is situated in Long Millgate, was founded four hundred years ago, in 1515, by Hugh Oldham, bishop of Exeter, a Mancunian by birth, who was educated at Knowsley House, the residence of James Stanley, Earl of Derby, the third husband of Margaret, mother of Henry VII. Here were gathered together certain "yonge gentilmen" whom she desired to shield from the dangerous influences of the Renascence, but Hugh Oldham afterwards became an ardent supporter of the new movement, and founded the school as a stepping-stone to the higher learning for such as "dared to be wise"—the motto of the school is "Sapere Aude"—by entering its portals. He also secured for it an intimate connection with Corpus Christi College, (the first of the Renascence colleges at Oxford) in the foundation of which he was associated with Bishop Foxe.

Besides the original founder, the names of Hugh Bexwycke (the Bishop's chaplain) and Joan Bexwycke, his wife; Sarah, Duchess of Somerset; Hannah Brakenbury; Edward Riley Langworthy; Thomas Wrigley; Richard Johnson; Charles Frederick Beyer; Oliver Heywood, and Charles John Oldham are daily commemorated in the school services.

For about three hundred and fifty years the school was little more than an ordinary free Grammar School,

though from time to time it turned out men of mark, *e.g.*, John Bradford, the martyred chaplain of Edward VI.; and at a later date De Quincey (1800-1802), and his contemporaries, Sam Bamford, the Lancashire poet; and Gilbert, Bishop of Chichester. Harrison Ainsworth was educated there, also Lord Chief Justice Alvanley: many others might be mentioned, did space permit.

During this long period the school income was derived from three mills on the adjoining stream of Irk. one of which, a flour mill, had a monopoly of corn-grinding in the township; and from the rents of property in the neighbourhood.

In 1867, however, the late Dr. F. W. Walker, afterwards High Master of St. Paul's School, Hammersmith, induced the governors to admit paying scholars, a measure which, aided by other favouring factors, soon bore fruit in the enormously increased size of the school. The old buildings were demolished one by one and replaced by new blocks, of which the latest is the Physics school, opened in 1913. There is now accommodation for a thousand pupils—a number which has already been reached—and the supply of recruits is greatly assisted by three preparatory schools, where the "owl" cap is also worn, and which contain in all more than three hundred boys.

Though always a stronghold of classical learning, the school has by no means neglected other branches, and it was amongst the first to introduce science teaching as a regular part of the curriculum. The physical and chemical laboratories are of great size, and it may be mentioned that Prof. H. B. Baker, the president of the Chemical Section at this year's meeting of the Association, is an Old Mancunian.

The present High Master is Mr. J. Lewis Paton, M.A., who has held office since 1903, and has added greatly to the activities and influence of the school.

C. L. B.

THE CANAL HEAD AT WORSLEY.

(c. 1766)

From an Aquatint by P. Burdett, after a Drawing by J. J. Rousseau.

BARTON AQUEDUCT.

(c. 1766)

From an Aquatint by P. Burdett, after a Drawing by J. J. Rousseau.

The Hulme Grammar School

THE School is connected with the famous Hulme Trust of Manchester, which was originally founded under the will of William Hulme, who died in 1691. With the lapse of years the estates had enormously increased in value, and were the subject of various Acts of Parliament and schemes of the Charity Commissioners. Finally, under a scheme dated August 26th, 1881, a boys' school was erected on a site to the south of Alexandra Park. In August, 1886, the first Headmaster was appointed—Dr. Hall; and in January, 1887, the School opened with eighty-one boys. At that time there was no other Public School for boys in Manchester, except the Manchester Grammar School; and the School supplied an evident want in the neighbourhood, as within five years the numbers had advanced to 246; and by 1900 to 272; and in 1903 the numbers reached 287. Later on the opening of the Manchester Municipal Secondary School caused some decrease in the numbers.

At first the leaving age was sixteen years, raised in 1890 to seventeen years, and under the 1909 scheme to eighteen years, with power of extension to nineteen years. In September, 1908, a Preparatory Class was opened with 12 boys, and has grown considerably since, until now there are normally nearly 40 boys between six and nine years of age. The whole School in July, 1915, numbers just over 330 boys. The curriculum of the Lower School takes English and Mathematics as the base of instruction, with added interests of Nature Study and Manual Work: and from the Second Forms French on modern lines is taught to all. In the highest forms of the Lower School, a choice has to be made between education depending on modern subjects or on the Classics; in the Upper School the classification is definitely made between a modern language and a classical type of education; and in the Fifth Forms a further division of the modern side into a language and a Science course is made, so that in the Upper Forms boys receive either a definite modern business, a

scientific, or a classical education, in preparation for the Universities or the Professions.

The School was quite a pioneer in modern methods of Geography teaching; and it has striven to keep in close touch with all modern methods, both for languages, including Classics taught on the oral method (being one of the few boys' schools doing so in the north), History, Science, and Mathematics taught on a special revised syllabus. It has turned out many men well known both locally and further afield, and keeps in touch with the University, and to a slighter extent with the older Universities.

The fine playing field is the largest attached to any Manchester school, and has enabled the authorities to have a system of compulsory games, with the boys arranged for games' purposes, in houses, called after local benefactors or celebrities:—Dalton, Byrom, Gaskell, Heywood. The buildings are not yet complete, as the Great Hall, erected only in 1911, is still unfinished, and the School still lacks a Swimming Bath and Gymnasium, and needs several extra class rooms. The foundations were well and carefully laid by the first Headmaster, Dr. Hall, who was Headmaster from its opening to his retirement in 1913, when the School went under the Board of Education as a grant-earning school.

W. A. P. M.

The High School for Girls

AS the Manchester Grammar School owes its foundation in 1515 to the humanistic impulse of the early sixteenth century, so the corresponding School for Girls in this city sprung from the impulse towards a better education for women, which was so marked a characteristic of the mid-Victorian era. It was founded by a committee of Manchester citizens, men and women interested in education, one being Sir Edward Donner, who is still a Governor; it was opened in January, 1874, with Miss Elizabeth Day as Head Mistress. In 1881 it entered its present home, the building in Dover Street, which is being used for sectional meetings of the British Association. It is

endowed from the Hulme Trust, a Manchester foundation, and has a Governing Body of its own, established by Schemes under the authority of the Privy Council, dated 1884 and 1911. These provide for representative Governors from the Universities, Oxford and Cambridge, London and Manchester, the Hulme Trust, City and County Councils, etc. The present Chairman of the Governors is Professor T. F. Tout, and the Treasurer, Mr. John Moodie. Of late years a very close relation, both formal and informal, has been established betwen the School and the University, an illustration of which is the fact that the Founders' Day Commemoration of the School is held annually in the Whitworth Hall. The building in Dover Street is of an unusual type, with wide corridors and a separate assembly hall; it has laboratories for biological work, as well as chemistry and physics, and a good library.

The School was definitely intended from the beginning to correspond with the Grammar School to "provide for Manchester's daughters what has been provided without stint for Manchester's sons." It has, therefore, always aimed at the highest standard in academic work, and has prepared its ablest girls for the Universities, where they have won a fair share of college scholarships, especially of late years in classics, history, and science. The Exhibitions on the Hulme Trust Foundation, in value about £400 per annum, are awarded to girls who have been at least two years in the School and are qualified to proceed to some place of higher education. The Lady Whitworth and the Mary Bradford Foundation Scholarships serve the same purpose, while the Hulme Endowment of £1,000 a year provides several open entrance scholarships yearly to girls of twelve years of age, and two or more scholarships in the school yearly. Other entrance scholarships limited to pupils in public elementary schools are awarded under the regulations of the Board of Education to the number of 10 per cent. on the entries. The school is regularly inspected by the Board and receives the full £5 grant. It also receives grants from the three local authorities on whose area it draws, the Manchester City Council, and the Lancashire and Cheshire County Councils. For

paying-pupils the fees are £15 per annum; £18 for those entering over thirteen years of age. The age limits are nine to nineteen years. The normal school course prepares for the Matriculation Examination of the Northern Universities, for which some 30 to 36 pupils enter yearly, but the school has also made elaborate experiments in vocational education, establishing a Housewifery course, preparing for the Housecraft Certificate of the Northern Joint Matriculation Board, and followed by some 50 older girls, and a secretarial department. This latter prepares directly for employment in public institutions, offices, banks, etc., and contains another 50 pupils. The School numbers 600, with a Staff of nearly 50 mistresses; among these are some research scholars at the University who teach part-time only, and two or three who are on the University Staff as lecturers. The present Head Mistress, who succeeded Miss Day in 1898, is Miss Sarah A. Burstall, who is a member of the Manchester Education Committee, and of the Joint Matriculation Board. There is a complete system of medical inspection, including the oversight of the gymnastic work and the general hygienic conditions of the School, under Dr. Catherine Chisholm, while Dr. John Scott has long acted as Medical Referee.

S. A. B.

Elementary Education in Manchester

Introduction.

THE Elementary School provision of Manchester is administered by a Sub-Committee consisting of all the members of the Education Committee, itself appointed annually by the City Council as the Local Education Authority under the Education Act of 1902. This Act changed the whole system which had been in force since 1870, welded together the previously existing Acts, and placed all education provided at the public cost under the control of one

popularly elected body in each area. Amongst other changes the public funds were charged with the maintenance of secular education in public elementary schools established by voluntary managers.

The Elementary Schools, therefore, comprise those provided and wholly maintained by the Authority, and those provided by voluntary managers and maintained by the Authority only so far as regards secular instruction. Both are conducted under the Regulations of the Board of Education, and works as follows:—

Public Elementary Schools

Organisation and Curriculum.

These, provided and non-provided, are organised in 389 departments for children from three to fourteen years of age, and work under a scheme of instruction adopted by the Committee in 1906. The principle of the scheme is to consider the needs and abilities of the children and to give prominence to lessons tending to open their minds rather than to store them. Regular attendance is encouraged by the award of certificates. For senior boys special provision is made for instruction in handicraft, and for senior girls, cookery, laundry work, housewifery, and instruction in the feeding and tending of infants. The Handicraft Scheme combines instruction in mechanical drawing to scale, with the subsequent production in wood of the articles drawn. The domestic subjects are taught in cottages known as Housewifery Centres, the aim being to show how to manage a home in the best and most orderly manner.

Religious Instruction.

Religious instruction is given daily at appointed times in all provided schools, and, briefly stated, comprises moral instruction founded on the Bible. In non-provided schools the religious instruction is controlled by the managers.

Physical Exercises, etc.

There is provision throughout of carefully graded physical exercises, and the public parks are utilised

for teaching organised games. Similarly, the public baths are used for teaching swimming.

The children's health is further promoted by utilising the opportunities of the Country School at Mobberley, to which batches of children may be sent during the summer months for a fortnight's holiday. Still further, many school playgrounds are open for recreation purposes from May to September.

Thrift.

Thrift is encouraged by means of a saving bank conducted in each department. The deposits last year amounted to £50,552, though less than the previous year by reason of the war.

Nature Study.

To encourage Nature Study, school gardens are provided wherever possible. Where such provision is not possible, plants for home cultivation are sold to the children at a nominal charge. Exhibitions are held annually, and awards are made to successful competitors.

District Central Schools.

These are six in number, one being under voluntary management, and form the apex of the Elementary School system in Manchester. They work ordinarily as public elementary schools but provide specially for children able to attend until sixteen years of age. Children are admitted at twelve years of age on educational qualification. The school course covers four years, and during the last two years is specially adapted for pupils contemplating industrial, commercial and home life. The schools are successful and well attended.

Schools for Afflicted Children.

Provision is made for children who are blind, deaf, mentally defective, epileptic, crippled, consumptive, and for those suffering from stammering. Except for a small day class, both blind and deaf are maintained in voluntary residential institutions. The mentally defected are taught in four Special Day Schools, a

few being maintained in volunary residential institutions. Epileptics, cripples, and consumptives are maintained in three separate residental institutions established by the Committee, each with its own medical officer and qualified nursing and teaching staffs. A few cripples are, however, taught in a day class. The provision for stammerers is by day classes, and their treatment has been notably successful.

Industrial Schools.

In Industrial School provision the Committee also avail themselves of existing institutions and happily the committals decrease year by year. This decrease applies also to the Committee's Day Industrial School.

Teaching Staff and School Attendance.

The teachers of all grades in Manchester Elementary Schools number 3,519. The last returns of attendance show 123,809 children on the school books with 105,520 in average attendance. This is exclusive of 330 in institutions for defective children and 296 in industrial schools.

Feeding of School Children.

The Committee take full advantage of the Acts of 1906 and 1914, and in normal times some 1,200 children are fed daily at eighteen Canteen Centres.

Medical Inspection.

The Medical Inspection of school children is conducted upon a scheme approved by the Board of Education, and is correlated generally with the Public Health Service of the City. The work grows in importance and extent year by year, and involves the services of a considerable medical, nursing and clerical staff. The School Medical Officer reports annually to the Education Committee and to the Board of Education.

Cost of Elementary Education.

The net charge on the rate for Elementary School provision in Manchester for the year ended March 31st, 1915, was 1s. 5d. in the £, upon a rateable value of £4,741,000.

General.

Whilst in this brief memorandum it has only been possible to give the barest particulars, even of the provision described, it is hardly necessary to explain that much has been omitted which is of importance to anyone desiring a full knowledge of the work done for Elementary Education in Manchester. Such enquirers will find all necessary additional information in the report which is presented annually by the Education Committee to the City Council.

S. H.

Secondary Schools in Manchester

THE provision of Secondary School accommodation by the Local Education Authority includes two large buildings in the centre of the city, and two local schools situated respectively in the northern and south-western suburbs.

These schools provide the following accommodation:

Central High School for Boys	625
Central High School for Girls	625
Harpurhey High School for Girls	150
Whalley Range High School for Girls ...	370
	1,770

On the passing of the Education Act in 1902, the newly-constituted Education Committee made a survey of the existing Secondary School facilities of the city, with the purpose of ascertaining to what extent further provision was necessary.

In 1903 they established the Municipal Secondary School, Whitworth Street (now the Central High School). At its inception the School provided places for 1,000 scholars, boys and girls. Later, to meet the increased demand for places, the Committee erected upon a site adjoining the original school a separate institution for girls. The boys remained in the old building, and at the present time the Central High Schools for Boys and Girls provide accommodation for 625 boys and 625 girls respectively.

THE SECONDARY SCHOOLS

In 1908 the Committee extended its activities by the purchase of the Whalley Range High School for Girls, Withington Road, from its proprietory managers. This School, situated in an ideal residential district, originally provided for 300 girls. By the recent purchase and equipment of the adjacent Alder House and grounds, the accommodation of the School has been increased to 370.

The Whalley Range School makes provision mainly for girls residing on the south side of the city. With the view of offering similar facilities at the north side, the Harpurhey High School for Girls was opened in a specially erected temporary building in 1914. At the present time the normal accommodation for 150 girls is being fully utilised and it is hoped to proceed at an early date to the erection of the permanent building.

Scholars are admitted to the Central High Schools at the age of ten years, and to the Whalley Range and Harpurhey Schools at six years, there being Kindergarten Departments attached to the latter institutions. The curricula of all the Schools are framed upon modern lines and each provides a course leading eventually to a matriculation standard. Particular attention is paid to the study of modern languages.

Whilst the instruction is intended primarily to give a broad and general training, it is so planned as to equip the scholars for their life's work. At the Central High Schools there are provided in the fourth and subsequent years of the course special departments for boys and girls respectively who propose to enter upon commercial careers. There is also a Higher Domestic Course for girls who desire to specialise in this direction. All the Secondary Schools are linked effectively with the Universities, and the departments for senior girls have effective co-ordination with the Municipal Training School of Domestic Economy. The Boys' High School connects directly with the Municipal School of Technology and this connection operates with much effect for boys intended for scientific industrial careers.

A leaving certificate is awarded at each school to scholars who have attended for at least three years and who have completed the fourth year of the course.

The Committee realises in the fullest measure the value to the community of a wide and adequate system of Secondary School education. It is their earnest aim to bring such an education within the reach of every deserving child in the city. By means of their comprehensive scheme of scholarships they have made it possible for all suitable children to pass from the public elementary schools through the secondary schools and on to the universities or other higher educational institutions. The applications for scholarships and for ordinary admission to the Secondary Schools are increasing each year, and the provision of further Secondary Schools is at present under consideration. The efforts made by the Committee to secure earlier entrance to Secondary Schools and to prolong the length of school life are making steady progress, and a tradition is being developed under which scholars admitted to the Secondary Schools remain in attendance for a period of at least four years.

S. H.

The Evening School System of the City of Manchester

THE Evening School System of the City of Manchester, so far as any effective measures are concerned for its provision, may be traced back to the foundation of the Mechanics' Institution in 1824; yet, in its present form, it may be said to be the creation of the last forty years.

Such institutions owed their origin to the movement initiated by Dr. Birkbeck of Glasgow, in the early years of last century, who, realising the ignorance displayed by even skilful artisans of the fundamental principles of science as bearing upon their work and the impossibility therefore of any great advance being made so long as the means of education in the sciences and in their practical application were not available, conceived the idea of establishing courses of lectures in Natural Philosophy, having this object in view. He met with a considerable measure of success,

and his example was widely followed, especially in the industrial areas of the North of England, so that by the year 1841 there were 216 Mechanics' Institutions in existence in Great Britain.

Manchester was one of the first of the manufacturing centres to establish such an Institution, and enjoys the distinction of having erected the first building in Great Britain to include accommodation for all the objects of a Mechanics' Institution. This building which was completed in 1825 still exists in Cooper Street, opposite to the Town Hall.

In the original prospectus of the Institution of 1824, it is stated that, "The Institution is formed for the purpose of enabling Mechanics and Artisans of whatever trade they may be to become acquainted with such branches of science as are of practical application in the exercise of that trade, and that there is no art which does not depend more or less on scientific principles, and to teach what these are, and to point out their practical application will form the chief object of the Institution."

In 1857 the Institution was removed to a specially erected and much larger building in Princess Street which later in 1883 became the Technical School, and is now the Day Training College for Teachers.

The career of the Mechanics' Institutions, valuable as their work was, did not fulfil the sanguine expectations of their founders and well-wishers.

Only a small percentage of their members was comprised of the class for which the Institutions were specially designed. The long hours of labour required of the artisan during the first half of the nineteenth century together with the miserably inadequate elementary education he had received rendered it impossible for him adequately to take advantage of the courses of instruction offered which included amongst other subjects practical geometry and drawing, mathematics, mechanics, physics and chemistry.

Further, no sufficient support either local or from the State was forthcoming to maintain such Institutions in a condition of efficiency either in respect of equipment or of staff.

The great mass of the population remained without any education worthy of the name, and, as appears

from a return for the year 1848, prepared by the Chief Constable of Manchester, out of a child population in the borough of 60,000 between five and fifteen years of age there were, including those in attendance at dame and infant schools, only 21,553 children under day school instruction. As late as 1870, Mr. Forster stated, on introducing the Elementary Educatoin Bill of that year, that "out of 65,000 children in Manchester who might be at school, of this number 16,000 go to no school at all, and that there are many schools where the education was not worth having, and that the conditions of other great cities of the kingdom was even worse."

Such efforts as were made to give the advantages of continued education to those who had entered upon the business of industry or of commerce were confined to sporadic efforts on the part of philanthropically minded and public spirited citizens and reached only a comparative few of the working population. Here and there was a Lyceum, or a Mechanics' Institution, or a Working Men's College attended by a small percentage of the class for whom they were designed, and the instruction was of necessity in most cases confined to the most elementary subjects of study, indeed, many of the Sunday schools were crowded with young people and with adults seeking the instruction they offered in reading, writing and arithmetic.

It was not until 1860 that the scheme of the Science and Art Department, sanctioned by Parliament in 1853, was in any sense made effective so as to provide for the due instruction and training of persons engaged in industry, and for this purpose there were in 1861 only 82 classes in the United Kingdom attended by 1,330 persons.

The International Exhibitions of 1851 in London and of 1867 in Paris gave striking evidence that the manufacturing industry of this country lagged behind that of the chief foreign nations alike in respect of the artistic and of the technical qualities of their industrial products. This roused considerable anxiety and much serious concern culminating ultimately in the appointment of the Royal Commission of 1882 whose report upon the efficiency of the general scientific, technical and artistic education available

in the chief continental countries, as compared with this country, undoubtedly led to the passing of the Technical Instruction Act of 1889 and all its subsequent important results.

Meantime, the Education Act of 1870, constituting Local Authorities for the purpose of Elementary Education with power to provide efficient means of instruction and later, with subsequent powers to compel the attendance of all children of school age, began to have a marked and beneficial effect upon the standard of education reached, and especially upon the number of children brought within its influence.

In 1869, the year before the Act of 1870, the children of school age in average attendance in the Public Elementary Schools of England and Wales numbered 1,285,319 in a population of 22 millions; in 1913 the number was 5,374,443 in a population of nearly 37 millions, or a relative increase of upwards of 3,200,000.

The institution of a Local Authority with full command over the schools and with the means of ascertaining the real educational needs of the area together with an increasing sense of its responsibility for the well-being of the children under its charge, quickly led to measures for continuing the education of the children leaving its schools, some of them at far too early an age for the real value and effects of education to be realised.

The advent of the Examinations of the City and Guilds of London Institute in 1879 proved a powerful stimulus to the provision of the means of Technical Education and Training, and was indeed an effective agent in promoting the successful establishment of the Technical School of the city, into which the Mechanics' Institution was transformed in 1883, the full development of which is to be found in the splendid School of Technology, in Sackville Street, opened in 1902, which was erected and equipped, the land being given, at a cost of £300,000.

The Education Act of 1902 had a further stimulating and unifying effect on the educational provision and administration of the Evening Class System of the City, the main features of which had been firmly

established under the School Board. A department of Higher Education was created which included amongst other activities the oversight and development of evening class instruction throughout the city. The scheme includes 45 Continuation Schools for both sexes, commercial, technical or domestic in character, arranged in grouped courses of six hours per week throughout the session with preparatory courses for pupils of backward education. In addition, courses are also arranged for boys and girls in attendance at 7 Lads' and Girls' Clubs, as well as special classes for Policemen and for Boy Telegraph Messengers ; 8 Branch Technical Schools arranged in two-year grouped courses of 6 to 7 hours weekly respectively for Mechanical and Electrical Engineers, Builders, and for those engaged in the Chemical Industries, leading to a further two-year course at the Municipal School of Technology ; 23 Branch Commercial Schools arranged in two-year grouped courses of six hours per week, which embrace modern languages and the specialised subjects required in the various departments of commercial and business life. leading up to a further two-year course in the Central Evening School of Commerce ; 13 District Evening Schools of Domestic Economy, meeting each on three evenings per week of two hours, with grouped courses, specialising in different subjects ; 6 Branch Classes for Elementary Art and Artistic Handicrafts, leading up to the advanced courses of study of the Municipal School of Art ; the Central Evening School of Domestic Economy, with advanced grouped courses in Domestic Subjects, in Artistic Crafts, and in other subjects of value and interest to women; the Municipal Evening School of Commerce, divided into a Lower and Higher School and embracing all the subjects in advanced courses of importance to the commercial and professional business man. The School of Languages provides instruction in no less than fifteen modern languages, inclusive of Latin—there are also afternoon courses provided on each day of the week from 4 to 6 ; the Municipal School of Art with systematic advanced courses in Drawing, Design, Painting, Modelling, Architecture, and the Artistic Crafts—Special Certificate Classes for Teachers

in various subjects; and finally, the Municipal School of Technology with advanced progressive courses of study in Mechanical, Electrical, Municipal and Sanitary Engineering, in Architecture and the Building Crafts, in Chemistry and Chemical Technology, in the Textile Industries, in Photography and the Printing Crafts, in Mining and in Mathematics, Physics and Natural Science. There are also highly specialised advanced courses in the various subjects of the above courses for duly qualified students, and arrangements are also made whereby apprentices in engineering works can attend complete part-time courses in the daytime.

From the foregoing statement it will be seen that the entire scheme of evening instruction under the control of the Education Committee is grouped and systematised so that each grade and department is, without wasteful overlapping, brought into intimate and organic relation with the rest.

Other classes for evening students in Commercial Subjects or in Natural Science, Economics, and in Modern Languages and Literature are held at the University, the Athenæum, and the Lower Mosley Street Schools. The provision in the neighbouring borough of Salford and in the populous Urban District of Stretford co-terminous with the city, ranging from the Continuation Schools to that of the Royal Technical Institute of Salford substantially on the lines laid down for the city should also be taken into account.

The total number of individuals in the various grades of Evening Schools conducted by the Education Committee in the session 1912-13, including 5,625 in the Schools of Technology and Art was 25,692, taught by 1,500 teachers in 95 schools, by far the largest enrolment of any county borough of the Kingdom, to which should be added at least 1,200 for the three institutions above named. The number in attendance in Salford and Stretford for the same period was upwards of 6,000.

So long, however, as the approximate proportion of boys over 14 and under 18 years of age, in attendance at Evening Schools, remains in the County Boroughs as low as 24 per cent. and of girls not more

than 12 per cent. (in the County areas it is very much less) so long shall we have our working class population growing up in ignorance not only of the subjects necessary for the occupation by which they live, but also of those subjects vital to their well-being as citizens.

It is to be regretted that the advent of the war has most seriously interfered not only with the number of students in attendance upon the classes, but also with the buildings hitherto available for instruction.

J. H. R.

The Duke of Bridgewater's Canal

THE development of Manchester commerce, was, in pre-railway days, greatly advanced by the local inception of a system of cheap transport by means of cross-country waterways.

Although navigable rivers were in use before what may be termed the "Canal Era," their utility was limited to their natural water-courses — whether canalised or not—traversing valleys from uplands to the sea, and subject to summer droughts or winter floods. Traffic down stream was comparatively easy under normal conditions, but the reverse journey was often a different matter.

Towns at a distance from such a river, had necessarily to make use of the waggon and packhorse roads of the period, consequently the cost of transport was of serious importance to a manufacturing centre, such as Manchester, at the beginning of the eighteenth century.

The local road traffic to and from Liverpool, which town had been growing in importance—owing to the decline of Chester as a western port—had damaged and congested the highways, and, as the trade of Manchester was increasing, it became imperative to devise some scheme for facilitating intercommunication between the two places. This produced the suggestion that the shallow stream of the Irwell should be rendered navigable. To that end a survey was made

Fresco in the Town Hall. PLATE 11. Ford Madox Brown.

JOHN DALTON COLLECTING MARSH FIRE GAS.

by Thomas Steers, who, in 1712, issued his report and plan of operations. Eventually an Act was obtained in 1720 (7, Geo. I.), the necessary work was done, and the Mersey and Irwell scheme was completed in 1721, when Manchester established its first waterway, and quay, for vessels of 50 tons.

This induced Scroop Egerton, the first Duke of Bridgewater to conceive the possibility of canalising Worsley Brook in order to float the output of his coal mines to the Irwell for transport. For this project an Act was obtained in 1737 (10, Geo. II.) by a company of Manchester men interested in the Mersey and Irwell navigation, but although their names are given in the preamble, the name of the Duke does not occur.

For some reason the scheme was not carried out and the Act lay dormant.

Some years afterwards, Francis Egerton, third son of the Duke, became at an early age, on the death of his father (1744-5) and his two elder brothers, the third Duke of Bridgewater. He was a typical, headstrong young Society man of the period, fond of horse racing and other fashionable pursuits. He also fell in love with the Duchess of Hamilton, but the match was broken off, and he retired to his Worsley estates which he decided to improve. He at once saw the value of his coal mines, and the wealth to be obtained by placing the produce cheaply in the centres of distribution. The Worsley Brook project he could not utilise for it was in other hands, so, after consultation with his agent, John Gilbert, a new scheme was devised, which was to make a huge ditch or level waterway between Worsley and Salford, the cutting to be supplied with water from various sources, including drainage pumped from the mines.

He obtained an Act of Parliament for this purpose in 1759 (32, Geo. II.), which repealed the abortive Act of 1737. Work was commenced, but after certain sections had been cut serious difficulties arose. In their dilemma, Gilbert suggested that a clever, though illiterate young engineer named Brindley, who had accomplished an extraordinary feat in the neighbourhood, should be consulted. Brindley advised the abandonment of the project to carry the cutting to

Salford, and urged that the canal should be taken across the Irwell, via Barton, to Manchester. Although a prominent engineer of the time (said to be Smeaton) ridiculed the idea of a three arched aqueduct for traffic purposes, the Duke had, however, complete confidence in Brindley, so another Act was obtained in 1760 (33, Geo. II.), the requisite work was accomplished and the canal opened in 1761, the Duke being then 25 years of age. Manchester thus obtained its *second* waterway and wharf.

An immediate result was that coal, which had previously brought prices at Manchester varying from from 10d. to 1s. 2d. per cwt. of 120 lbs., was now sold at the Castlefield wharf at 4d. per cwt.

The benefit to the community was great at a time when steam power was in its infancy, and the successful use of an artificial cut or level water-road between the two places was thus demonstrated in a thoroughly practical manner, for the cost of haulage was reduced to an exceedingly low limit, because it was possible for one mule to draw a boat load of 25 tons or more on a canal, which weight carted along a rough road would need a team of 10 or 12 horses, the wear and tear being also greater.

The Worsley and Manchester Canal was, therefore, the first beginning of a new era (see note on page 84).

The Duke, desiring to extend the usefulness of his waterway, obtained an Act in 1762 (2, Geo. III.) which enabled him to carry the canal from Stretford to Runcorn, this, after enormous financial and engineering difficulties was also completed. He had reached Runcorn in 1767, but it was not until 1772 that barges were floated to his wharves in Liverpool. This completed his second link, and the two sections eventually produced a princely fortune.

Brindley then joined a Staffordshire syndicate (of which the great Josiah Wedgwood was a member) the object of which was to unite the Bridgewater system with the Potteries and salt towns of Cheshire, and, by carrying this Canal extension on to the Trent and Humber, enable Manchester and Liverpool to be connected by a cross country water line with Hull. This scheme was also carried out, and canal making became of such general importance that few towns in the

country were unconnected by means of artificial canals, the traffic on which was very great until the advent of railways. In this latter respect also Manchester was a pioneer of industry, by assisting in the construction of the great public railroad between Liverpool and Manchester in 1830, which line practically became the parent of all the railway systems in the world. In steamboat building also the district has taken a leading part, for in the Worsley Yards was constructed one of the earliest steam boats to be put to practical use; its engine and machinery were made in Salford. It was discarded as a tug and afterwards used as a floating steam pumping engine, at Stretford in 1799. Parts of the machinery have been preserved at Walkden, and a reproduction of a detail drawing of the boat may be seen on the walls of the Worsley Club House.

In addition to the enormous increase of cross-country traffic inaugurated by the Bridgewater Canal system, many interesting engineering facts could be mentioned, did space permit, but a brief note of a few only must suffice:—

Owing to the cost and difficulty of obtaining lime in large quantities from Derbyshire for building purposes, Brindley invented from a local calcareous clay a hydraulic cement, said to be the first of its kind in England; it was burnt in the kiln which may still be seen at Worsley; by this process it is estimated he saved the Duke £20,000.

In addition to his aqueducts at Barton and Stretford, Brindley astonished the engineers of his day by carrying the canal on an embankment across the marshy ground of Sale Moor, thus preserving the water level, which, on the Bridgewater system is uninterrupted by locks for a distance of 40 miles.

The subterranean canal system on two levels in the coal mines beneath the high ground of Worsley and Walkden reaches a total of over 30 miles, these levels are connected by an underground inclined plane (constructed, 1795-1797) down which, until a few years ago, loaded coal boats were slid to the lower canal and propelled by hand for a distance of three miles, to the water line adit at Worsley village.

The Duke of Bridgewater's artificial canal is spanned

at Patricroft by the original line of the Liverpool and Manchester Railway, the old bridge being still in existence. At the intersection stands Nasmyths' works where his steam hammer was put to such useful service for the huge forgings required for heavy machinery which, owing to the use of steam power, had become a necessity (see plate 8).

A Passenger Service was instituted by the Duke on his canals in 1772. This was adopted on other systems so that it became possible to travel from London or Bath to Scotland by water, and troops were conveyed by this means.

It may be added that views of the canal head at Worsley and Barton Aqueduct, painted from drawings by J. J. Rousseau, appear on the Wedgwood dinner service made by order of Catherine II. of Russia. This service of china, lost for many years and found in 1909, is now at Peterhof near Petrograd (see plate 10).

After the death of the Duke in 1803, his canal system was carried on by Trustees until it became, by purchase, merged in the great modern undertaking known as the Manchester Ship Canal, details of which appear elsewhere.

To Francis, third Duke of Bridgewater (the Great Duke), who in his day was one of the prominent pioneers of commerce and industry in the district, or to his help-mate, James Brindley, a workman's son (a worthy combination of capital and labour), *no local monuments exist*, except those silent waterways constructed under their supervision.

Many lesser lights connected with the district are commemorated in marble or bronze, but of these two great men the opinion of Manchester appears to be

Finis Coronat Opus.

J. J. P.

It has been asserted that the Sankey Brook Canal, near Warrington, for which Acts of Parliament were obtained in 1755, and later, has priority. This may be so as regards the date of a preliminary opening for traffic in 1760, but, seeing that the Sankey Brook Canal utilised an ordinary stream and required locks it came within the category of other rivers rendered navigable, whereas the Worsley and Manchester Canal was artificially constructed across country, between two definite points, required no locks, and did not utilise any existing river course. *There lies the difference which created a new system.*

The Manchester Ship Canal

THE construction of the Ship Canal was begun in November, 1887, and the waterway was opened for traffic on January 1st, 1894, being formally inaugurated by Her late Majesty Queen Victoria, on May 21st, 1894.

Capital.

The total capital expenditure on the construction of the Manchester Ship Canal and Docks, including the purchase of the Bridgewater Canals amounted to £16,857,027 at December 31st, 1914.

The Waterway.

The Ship Canal is entered from the River Mersey at Eastham. It is 35½ miles in length, 28 feet deep, and has a minimum bottom width of 120 feet.

There are five sets of locks, the dimensions being as follows:—

	Small Locks. Feet.	Intermediate Locks. Feet.	Large Locks. Feet.	Rise.
Eastham ...	150 by 30	350 by 50	600 by 80	—
Latchford...	—	350 by 45	600 by 65	14ft. 6in.
Irlam	—	350 by 45	600 by 65	16ft. 0in.
Barton ...	—	350 by 45	600 by 65	15ft. 0in.
Mode Wheel (Manchester)	—	350 by 45	600 by 65	13ft. 0in.

The Locks are constructed of concrete faced with blue brick, and provided with jetties of timber-work both above and below for facilitating the entrance of vessels. The gates, of which there are three pairs to each Lock, are worked by hydraulic machinery.

Partington Coaling Basin.

The principal Coaling Depot on the Canal is at Partington, nine miles from Manchester. Here there is quay space of 20 acres, and frontage to the canal of nearly three-quarters of a mile. The water area is

6½ acres, and the Company's Railway Sidings are 22½ miles in length. There are six Hydraulic Tips of the most modern construction and approved type.

Manchester Docks.

The area of the Manchester Dock Estate is 406½ acres, including the water area of 120 acres. The Quays are 6½ miles in length and 286½ acres in extent. The dimensions of the Docks are as follows:—

No. 1	700 by 120 feet
,, 2	600 by 150 ,,
,, 3	600 by 150 ,,
,, 4	560 by 150 ,,
,, 5	(not constructed)
,, 6	850 by 225 ,,
,, 7	1,160 by 225 ,,
,, 8	1,340 by 250 ,,
,, 9	2,700 by 250 ,,

Equipment.

The equipment of the Manchester Docks includes 53 hydraulic, 64 steam, and 130 electric cranes, with a radius of 16 to 40 feet, and capable of lifting from 1 to 10 tons to a height from rail level of from 13 to 80 feet, a 30-ton steam crane, 51 locomotives, 6 floating pontoons of a dead-weight capacity of 800 tons each, and all modern appliances for affording vessels quick despatch. There is also a Pontoon Sheers capable of dealing with weights of up to 250 tons, with a lift of 21 feet.

There is a range of 11 single-floor, 1 two-floor, 6 three-floor, 5 four-floor, and 14 five-floor transit sheds, fitted with the most modern appliances; also 13 warehouses, seven stories each, fitted with 27 friction hoists, worked by gas engine.

The water area of No. 9 Dock (opened in 1905) is 15·6 acres with surrounding quay space, railways, of 32·6 acres. The southerly side of the dock is equipped with a series of five transit sheds for the receipt of cargo from or for vessels, which forms probably the largest system of transit shed accommodation in the world; the sheds are constructed entirely of reinforced-concrete (Hennibique system), the whole

of the structure of each shed being formed of steel rods embedded in Portland cement concrete.

The equipment of the Manchester Docks includes all the latest appliances for handling, storing, and distributing traffic and comprises:—

A Grain Elevator capable of discharging grain from vessels at the rate of 450 tons per hour. The Elevator has a storage capacity of 40,000 tons, or 1,500,000 bushels.

A second Elevator is now approaching completion at the end of No. 9 Dock, and this Elevator will be connected by means of subways with the discharging berths along the whole length of the dock, enabling vessels to discharge grain on to bands for transmission to the Elevator simultaneously with discharge of the general cargo into the Transit Sheds.

Timber storage yards and covered sheds for stocking Timber.

Over 2,000 railway wagons for moving traffic to and from Dock Sheds and Warehouses, Railway Connections, Open Storage Grounds and Works in Trafford Park.

The Animals' Landing Wharf with lairage accommodation for 1,850 head of cattle and 1,500 sheep; a landing wharf for live stock from Ireland with facilities for loading to railway trucks for despatch to interior points.

A Refrigerated Transit Chamber with a capacity of 85,500 cubic feet being the equivalent of 35,000 carcases of frozen mutton, for receiving, sorting, and loading to railway wagons for carts—frozen meat and other perishable products imported in refrigerated chambers. This provision is made in order to prevent the ships being detained while the carts and railway cars take the meat from alongside.

The Union Cold Storage Company have a Cold Stores at the Manchester Docks, also another depot in the city; the Manchester Corporation have large Cold Storage installations in the city, the total capacity of these depots being the equivalent of 300,000 carcases of frozen mutton.

Fifty-four oil tanks with a storage capacity of

33,988,650 gallons or 125,091 tons, with wharves alongside to permit steamers discharging direct into the Tanks.

The Manchester Dry Docks Company have two dry docks 535 feet and 425 feet long respectively and 65 feet in width, as well as pontoons capable of lifting vessels weighing up to 2,000 tons. The construction of a third dry dock has just been put in hand.

Coaling Crane capable of lifting 25 tons, which tips coal direct into vessels lying alongside.

"The Gamewell Fire Alarm" system has been established at the Docks by means of which the Manchester and Salford Fire Brigades, and the Manchester Fire and Salvage Boat "FIREFLY" (capable of throwing 4,000 gallons of water per minute) can be promptly summoned to any part of the Dock Estate on the outbreak of a fire. The Ship Canal Company also maintain at the docks and at the Grain Elevator an efficient Fire Brigade fully equipped.

Rail Connections.

All the loading and discharging berths, transit sheds, and warehouses at the Manchester Docks have direct railway connection lines running on both sides of each building, also in some instances through the interior of the transit sheds and warehouses.

Steamship Lines.

Regular lines of steamers operate between Manchester and most of the principal countries of the world, including Canadian Ports, Boston, New York, Philadelphia, Savannah, Brunswick, Pensacola, New Orleans, Galveston, Brazil, Bombay, Persian Gulf, Australia, New Zealand, Alexandria, Syrian Coast, Italian and Spanish Fruit Ports, Copenhagen, Gothenburg, Archangel, Christiania, Skien, Rotterdam, Rouen, Treport, and Bordeaux; and Coastwise Ports, including Aberdeen, Dundee, Leith, Glasgow, Belfast, Dublin, Cardiff, Swansea, Bristol, Southampton, and London.

Twin-screw steamers with a dead-weight capacity of 12,850 tons are trading regularly to Manchester.

Fresco in the Town Hall. PLATE 12. Ford Madox Brown.

THE ESTABLISHMENT OF FLEMISH WEAVERS IN MANCHESTER IN 1363.

Distributing Area.

Manchester is situated in the most densely populated area in the United Kingdom, and, as a port, is the nearest source of supply for at least 170 interior towns. The district in which these towns are situated is nearer to Manchester than to any other steamship port, and contains a population of over nine million people, while the area to and from which the canal traffic can be carted contains a population of over two millions.

Land Adjoining the Canal.

The Canal Company have land for sale on the banks of the Canal. Most of the plots are connected by means of the Company's railways with the main line railways of the various companies. Many important works are located on the banks of the Canal, and other works are in course of construction.

The following table gives the total tonnage of merchandise traffic which passed over the Ship Canal. and the total Revenue for each year since the opening of the Canal in 1894:—

Year.	Total Tons Merchandise.	Ship Canal Tolls, Ship Dues, and Miscellaneous Receipts.
1894	925,659	£ 97,901
1895	1,358,875	137,474
1896	1,826,237	182,330
1897	2,065,815	204,664
1898	2,595,585	236,225
1899	2,778,108	264,775
1900	3,060,516	290,830
1901	2,942,393	309,517
1902	3,418,059	358,491
1903	3,846,895	397,026
1904	3,917,578	418,043
1905	4,253,354	449,436
1906	4,700,924	498,837
1907	5,210,759	535,585
1908	4,582,496	506,975
1909	4,563,401	534,059
1910	4,937,631	555,735
1911	5,217,812	580,841
1912	5,339,884	605,179
1913	5,780,161	654,937
1914	5,424,732	656,237

The Manchester Literary and Philosophical Society

THIS Society was founded in the year 1781, and owes its inception, in great measure, to Dr. Percival, of Warrington, who came to Manchester in 1767, obtaining there a fine practice as a physician, and a high social position. His biographer states that owing to the influence of Lord Willoughby of Parham and to the personality of the young man, but not to his scientific labours, he was elected a Fellow of the Royal Society at the early age of twenty-five years.

For some years the meetings were held in the houses of the more prominent members of the Society, but in 1796 a movement was set on foot to purchase a plot of land and to erect thereon a building suitable for the meetings of the Society, for the accommodation of the library, and for the conduct of experiments and observation in the Natural Sciences. At the time there was some vacant land in George Street, and the proposal was made that this should by bought for the purpose, through the agency of a certain Mr. Thomas Holland.

In the minutes of February 14th, 1797, there is the following entry, "That the offer of Mr. Thomas Holland to make this purchase for the use of the Society and to advance whatsoever sum of money may be wanted for the building at a clear interest of five per cent. be accepted." The original building must have been erected soon after this date for, in 1799, some rooms in it were placed by the Society at the disposal of John Dalton, for use as study and laboratory. The premises were enlarged in 1885 at a cost of nearly £2,000, this sum being raised by subscription of the members, and, about the same time, thanks to one of the many generous benefactions made by Dr. Henry Wilde, F.R.S., to the Society, the old building was renovated and the porch and stone-wall adjoining the street were added.

The association of John Dalton with the Society is one of its most cherished memories; for it was

undoubtedly in its rooms that the experiments were conducted which led to the conception of his famous Atomic theory.

Dalton was elected a member of the Society in 1794 while still a teacher in the Manchester New College, and he was President of the Society from 1817 until 1844, the year of his death.

By his will, Dalton bequeathed all his chemical and other philosophical instruments and apparatus to his friend Dr. Henry, by whom they were presented to the Society. These instruments and apparatus have been arranged in glass cases in the Society's premises, and a descriptive account of some of them by Mr. Francis Jones was published in the Society's Memoirs (Vol. xlviii., 1904). The Society is also in possession of his manuscript notes, the diagrams to illustrate his lectures, his Royal medals, his hat, his walking stick, and other personal relics.

Among other famous men who have been members of the Society and have contributed to its memoirs mention must be made, even in this short notice, of J. Prescott Joule, F.R.S., who first experimentally determined the Mechanical Equivalent of heat. He was elected a member of the Society in 1842, and was its President in 1860 and 1861.

The first volume of the Memoirs of the Literary and Philosophical Society was published in 1785, and from that date there is a continuous series down to the present time. In addition to the many memoirs by Dalton and Joule the series contains many papers of great scientific interest and importance.

The visitor to the Society's house, 36, George Street, as it is at the present day, should first visit the little room on the left of the Hall, which Dalton probably used as a study and reading room. It contains a tablet presented by Dr. E. Schunck, F.R.S., a former President of the Society, to commemorate the connection of Dalton with the Society. In the Council room, on the right, may be seen Joule's chronometer and portraits of several past Presidents of the Society. In the passage, on the first floor, leading to the meeting room, Dalton's manuscripts and apparatus are exhibited. In the meeting room there are portraits of Sir I. Newton, Sir Humphrey Davy, John Dalton, J. P. Joule, Dr.

Percival, and other distinguished men who have been associated with the Society. The Society is also in possession of a very fine library of scientific literature.

S. J. H.

The Literature, Drama, and Music

(i.) Literature

THE literary history of Manchester during the last four centuries falls into three phases, which, in a broad diagrammatic way, may be symbolised by the names of Humphrey Chetham, John Byrom, and Elizabeth Gaskell.

In the first phase Manchester acquired a great library, but hardly produced books herself; in the second she wrote, sometimes cleverly enough, but as a provincial out-post of letters, without distinctive note; in the third, she became herself the subject and inspiration of literature provincial only in the sense that it powerfully reproduced the life and character of a province.

Up to the end of the seventeenth century the place was a populous industrial village, called by Leland, indeed, the "quickest" town in Lancashire but, in all matters of learning and letters, fully sharing the darkness which then overspread the northern counties of England, somewhat lifting at most over their ancient capital, York. Yet the story of the Warden of the Collegiate Church, early in the sixteenth century, who on being appointed Bishop of Ely, made lavish offers to Erasmus to become his tutor, attests that some of these children of darkness were, at least, "crying for the light," and prophesies faintly of unborn universities. More sinister traditions attach to the name of another early Warden, Dr. John Dee (1529-1608), alchemist, seer of spirits, and a possible original for Johnson's Subtle. His Diary, and other records of superstructural adventure were published in a huge folio in 1659, and eagerly devoured. But his exploits were, in the main, over when the Queen, in her last years, appointed him to the Wardenship.

In 1647 Humphrey Chetham set up in the derelict College of the Collegiate Church, the first public library in England. It is still known by his name, and survives, a bit of old-world Oxford, amid the roar of busy streets. Its foundation marks the formation of an incipient reading public—a nucleus of persons who combined commerce and industry with an interest in literature. From the beginning of the eighteenth century this cultivated nucleus became sufficiently large and important to give Manchester a place among the more lettered of English towns. The Grammar School, the Chetham Library and the Collegiate Church, all of them well-endowed, formed definite coigns of vantage and points of repair for this still precarious culture, and Chetham Librarians and Collegiate Wardens figure largely in the spare literary annals of the eighteenth century town. In 1719 the first newspaper, the *Manchester Weekly Journal* was established, and in the same year the list of Manchester publications opens impressively with a volume of Mathematical lectures, read before the local Mathematical Society by one John Jackson.

Five years later a native of Manchester, already distinguished in Cambridge and London, returned to settle in his birthplace, and to become the one poet, recognised in literary history, whom Manchester can claim with full right as her own. John Byrom (1692-1763) came of a family which had done and was to do substantial things for the town. The son (like Pope) of a well-to-do linen draper, he studied at Trinity College, Cambridge, then under the formidable headship of Richard Bentley, and is said to have drawn the shepherdess heroine of his pretty idyll *Colin and Phœbe*, from the Master's little daughter Joan, then aged eleven. He also contributed two papers on Dreams to the *Spectator* (August 27th and 30th, 1714) which Addison, though knowing nothing of his young correspondent, introduced to his readers with a very complimentary preface. His ingenuity took a more practical form in his invention of a system of shorthand, which, though apparently more elegant than rapid, was widely admired, and procured his election, in 1724, to a fellowship of the Royal Society, as well as the acquaintance of many men of distinction. His

Diary describes interesting conversations, among others, with Bentley, Butler, Samuel Clark, and William Law. To the last-named he was drawn into close relations by a common vein of religious mysticism. He sought to popularise by paraphrase Law's noble but esoteric prose; he learnt German in order to read the German mystic, Jakob Boehme; and he has described in some of his happiest verses the palpitating joy with which he secured at a London auction a portrait of the great French thinker Malebranche, who "saw all things in God." Byrom's forty years' residence in Manchester was given partly to medical practice (he had studied awhile at Leyden), partly to Jacobite politics, carried on, however, with a prudence which always kept to windward of treason, and saved him, in 1745, from incurring the fate of the distinguished fellow-townsmen whose heads subsequently adorned the first Exchange; and partly in tempering Hanoverian and other despotisms with epigrams and *jeux d'esprit* which frequently had some salt, but were innocent of either pepper or vinegar. His form of "blessing" for King and Pretender—

> "But which Pretender is, and which is King,
> God bless us all, is quite another thing"—

is something of a classic in its kind; and almost as well known, though less pointed, is his sarcasm at the expense of the monopolists of the Grammar School, at whose Mill (in Millgate) all corn used in Manchester had still to be ground. A wider and far more lasting audience was won by his hymns, especially the "Christians Awake," a worthy fellow to the contemporary work of the Wesleys. It was composed by the organist of the Collegiate Church, John Wainwright, who may be said to open the history of Manchester music as Byrom opens that of Manchester letters. Byrom left a large library, rich in the mystics and the shorthand-writers. His name is commemorated in a Manchester street which stands at right angles with Quay Street. His own house, Kersal Cell, on the northern heights, still exists.

During the second half of the eighteenth century the signs of intellectual activity in widely different fields steadily grew. The most significant of them

was the foundation, in 1781, of the "Literary and Philosophical" Institution (see page 90). It originated in a meeting held in a tavern by a number of Manchester men interested in letters or in science, and had thus at the outset neither the predominantly specialist, nor the predominantly scientific, character of its later phases. In 1759 James Thyer, the learned Chetham Librarian of the day, edited the *Remains*, hitherto unprinted, of the author of *Hudibras*, making accessible for the first time his pungent and illuminating *Characters*—a substantial service to literary history. A Warden of the Collegiate Church, Richard Wroe, whose pulpit oratory won him the name of "Silver-tongued Wroe," published, in 1782, a treatise on "The Beauty of Unity;" an apt subject, for the Collegiate Church had been the focus of the hottest Jacobitism of the town. There was probably more local colour in the work of another clergyman, Thomas Seddon, who published, in 1779, a set of lampoons under the innocent title of "Characteristic Strictures upon a series of (imaginary) Portraits." For the rest, Manchester already had her historiographer, Thomas Whittaker having published his *History of Manchester*, a meagre fragment it is true, in 1771. Nay, she already had her epic poet, one James Ogden, who in the heyday of the Seven Years' War vanquished the French in a portentous heroic poem, *The British Lion Rouz'd* (1762), published by local subscription; and nearly thirty years later celebrated the glories of King William in *The Revolution: an epic poem in twelve books* (1790) with invocation, guardian angels, and the rest of the approved epic machinery, besides a preliminary exposition of the laws of epic which for lofty self-consciousness might have ushered in *Paradise Lost* itself.

Yet with all this literary effulgence, it was still possible for a young poet, whose verses were considerably less wooden than those of "Poet Ogden," to knock in vain at the gate of an opulent Manchester cotton dealer—perhaps one of the very men who had subscribed in their hundreds to hear the roar of *The British Lion Rouz'd*. For this, the reader will remember, was the fate of Samuel Taylor Coleridge when, as

he tells in the *Biographia Literaria,* he came here, one December day of 1795, seeking subscribers for his *Watchman.* Coleridge entered the office and was granted a personal interview with the great man. "He . . . measured me from head to foot and again from foot to head, and then asked if I had any bill or invoice of the thing; I presented my prospectus to him; he rapidly skimmed and hemmed over the first side and still more rapidly the second and concluding page; crushed it within his fingers and the palm of his hand; . . . and lastly putting it into his pocket turned his back on me with an '*over-run* with these articles!' and so without another syllable retired into his counting house."

But Manchester cotton-dealers were not all like this. Coleridge's younger friend, De Quincey, who had passed his boyhood in Manchester but had no prejudices in its favour, has left a tribute of very different tenor to Manchester society. "In Manchester I have witnessed more interesting conversation, as much information, and more eloquence in conveying it, than is usual in literary cities or places professedly learned . . . The time is more happily distributed," (so he explained the phenomenon); "the day given to business and active duties, the evening to relaxation . . . so that books are more cordially enjoyed."

Thomas De Quincey's birth here (in 1785) is accounted Manchester's most illustrious contribution to our literature. But Manchester was for him little more than a place to get away from or at least to pass through. It was while waiting for the train in a Manchester tavern that he wrote the *Vision of Sudden Death;* but Manchester had no such intrinsic share in the result as Coventry could claim in the poem which beguiled Tennyson's enforced leisure under similar circumstances. Yet, during the first half of the nineteenth century, Manchester men, if not very prolific themselves, contributed remarkably to literature in others. The death of Charles Gough on Helvellyn, in 1805, set Scott and Wordsworth singing: the "massacred" operatives of Peterloo provoked Shelley's *Masque of Anarchy* and Henry Hunt's *Letters from Manchester Gaol;* the brothers Grant, twenty years later, were immortalised in the Cheeryble

Brothers; reminiscences of Manchester (his birthplace) helped to furnish the Wardour Street Waverleys of Harrison Ainsworth (1805-1882); while the hardly less melodramatic but far abler picture of Manchester presented by Disraeli in *Coningsby* (1844) provided the country at large, on the eve of the Anti-Corn law crisis, with a rough working idea of the still half inarticulate populations which were now asserting their formidable power. It was in these years that Manchester acquired its clearly marked individuality—for Europe as well as for England—among English towns; and as "Manchesterthum" became, with continental economists, a label for the most distinctively English school of economic thought, so the "Manchester Man" became a recognised type of character, available for satire or caricature, for the novel or the stage. Hence the well-known novel of Mrs. Linnaeus Banks (1876). A vigorous sample of the "Manchester Man" described by himself may be gathered from the reminiscences of Samuel Bamford (*Passages from the Life of a Radical*, etc.) the weaver who suffered imprisonment after Peterloo. But the sturdy independence of the type breaks down in his feebly imitative verses (*Poems*, 1844); nowhere more distinctly than when he tries to capture the note of poets of the people like himself—of Ebenezer Elliot or of Burns.

Of far greater merit, however, than any previous study of Manchester character was that achieved by Elizabeth Cleghorn Gaskell (1810-66) in *Mary Barton* (1848), and, with less distinction but more art, in *North and South* (1855). Mrs. Gaskell was not a native, but, as a resident and the wife of a leading minister, was qualified both by intimacy and by detachment for her task. Nearly all her books were written in her Manchester home; and the plain but dignified Georgian house, now alas! empty and forlorn, was for sixty years, until the recent death of her eldest unmarried daughter, a focus for literary, scientific and philanthropic Manchester, and the frequent resort of persons of distinction from outside. Not least among these was Charlotte Brontë, whose life she was afterwards to write.

Literature had indeed since the third decade of the

century found not merely a hospitable shelter but something like a home in Manchester. We do not speak of the writing of this or that erudite or distinguished book by her residents or her sons: of the classical and Norse translations, for instance, of William Herbert (*d.* 1847) the last Warden and first Dean; or of *The History of the Siege of Gibraltar* by Colonel Drinkwater-Rethune (*d.* 1844), who had been in it. These, though the race of writing deans did not die out with Herbert, were mere "sports." But on three kinds of literature—none, it is true, of the highest—Manchester may be said to have set her mark:—journalism, antiquarianism and dialect prose and verse.

On May 5th, 1821—the day of Napoleon's death at St. Helena—John Edward Taylor, a vigorous local champion of Liberalism, founded the *Manchester Guardian;* at first as a weekly paper, at the price of 7d. This is no place either for eulogy or disparagement of a great political organ; but our brief history would be gravely incomplete without a reference to the momentous services which, especially during the last half century, it has rendered to the intellectual and social life of Manchester, in part by the high literary standard it has steadily maintained, but even more by its powerful advocacy of those cultured interests to which poor Coleridge, just a quarter of a century before its foundation, had found his "opulent cotton dealer" so impervious. Four years later a rival organ, the *Manchester Courier,* was founded, with Alaric Watts, a brilliant young journalist, as its first editor. A second Liberal paper, *The Examiner and Times,* was conducted during the third quarter of the century with distinguished ability. Its last editor, Henry Dunckley ("Verax") stood in the highest rank of living journalists.

The proprietor of the *Examiner,* Alexander Ireland, was the most distinguished scholar among the Manchester men of business of his day. He was a specialist in Hazlitt, and published a valuable bibliography of his works, and of those of Leigh Hunt, an exhaustive collection of them, with those of William Godwin, being in his own library. He was the host of Emerson on his memorable visit in 1847, to which there are many

references in the *English Traits*. Kindred collections were to be found, or were growing up, in the Manchester neighbourhood. The vast antiquarian library, and equally vast antiquarian learning, of James Crossley were famous all over England. John Eglinton Bailey, whose days were spent in a cotton warehouse, possessed all the editions of the *Anatomy of Melancholy*, and wrote the most authoritative life of Thomas Fuller. Of slighter note, but typical of much obscure industry, may be mentioned the Tractarian collection of John Finlayson, a clerk in the Bank of England, and that of the works of self-educated poets by a police-superintendent, Gee. John Harland laboured with Baines upon the history of Lancashire. Edwin Butterworth and William E. A. Axon explored the local history of Manchester with inexhaustible industry, resulting in the *Tabula Mancuniensis* of the one and (among a host of other antiquarian and literary writings) the *Annals of Manchester* of the other. More collective expression had been given to these activities by a number of academic societies:—the Chetham Society, which has published among other works a valuable edition of Byrom, the Spenser Society, the Manchester Goethe Society (1886-96), the Manchester Literary Club, which now publishes a periodical, the *Manchester Quarterly*, and others. The late President of the Literary Club, George Milner, was for thirty years the genial centre of Literary Manchester, and several of its departed members, especially the poet H. S. Sutton, deserve a passing mention. The Lancashire and Cheshire Antiquarian Society has long had its headquarters here. Finally, these manifold literary and collecting activities were worthily crowned by Mrs. Enriqueta Rylands, who, in 1898, founded the great John Rylands Library (see page 60).

A less bookish audience was, in the main, addressed by the writers in dialect. The father of Lancashire dialect literature in the strict sense (for the fourteenth century *Gawain and the Green Knight*, which Lancashire may perhaps claim, was written before a national literary language had begun to exist, and Spenser, though he peppered some pages with Lancashire words, "writ no language") was the homely school-master of

Milnrow, John Collier (1710-86), better known by his still homelier pseudonym, Tim Bobbin. "Tim Bobbin" and his songs and tales have remained a kind of legend in Lancashire; but the day of dialect literature hardly dawned here before the middle of the nineteenth century, when a number of dialect writers (genuine and otherwise) sprang up within a few years; particularly Ben Brierley and Edwin Waugh. Brierley produced between 1850 and 1890 a long series of sketches, tales and farces, rivalling the popularity of Tim Bobbin under his frequent style of "Ab-o'-th'-Yate," and excelling in rough but thoroughly genial humour. Edwin Waugh also started about 1850, and by 1880 had produced a score or more of sketches and tales, with poems and songs. Waugh was more of a literary artist than Brierley, and delighted to present his broadest humours in a setting of rather too consciously refined and decorated prose.

Apart from dialect, Manchester writers have produced several novels and sketches of literary note during the last generation. It must suffice to mention (living writers being excluded) Louisa Potter's *Lancashire Sketches* (1879), Jessie Fothergill's *The First Violin*, and others, and the subtle and beautiful *Fireside Fables* (1910) of Edwin Barrow.

Since 1850, Literary Manchester has received important accessions from the members of the great foundation of John Owens, and its successor the present University. The history of the University is told in another chapter, but it is pardonable to recall in this place also that books of such distinction as Jevons's *Theory of Political Economy* or Adamson's *Fichte* (to mention only writers no longer living), were written here. Latterly, the University itself has established an official Press, issuing many series of publications in various branches of knowledge (see page 48). The University counts among former students Francis Thompson and George Gissing.

(ii.) Drama

The history of *Drama* in Manchester is of considerable distinction, but its salient events may be told in a few words. The first Theatre, the Theatre Royal,

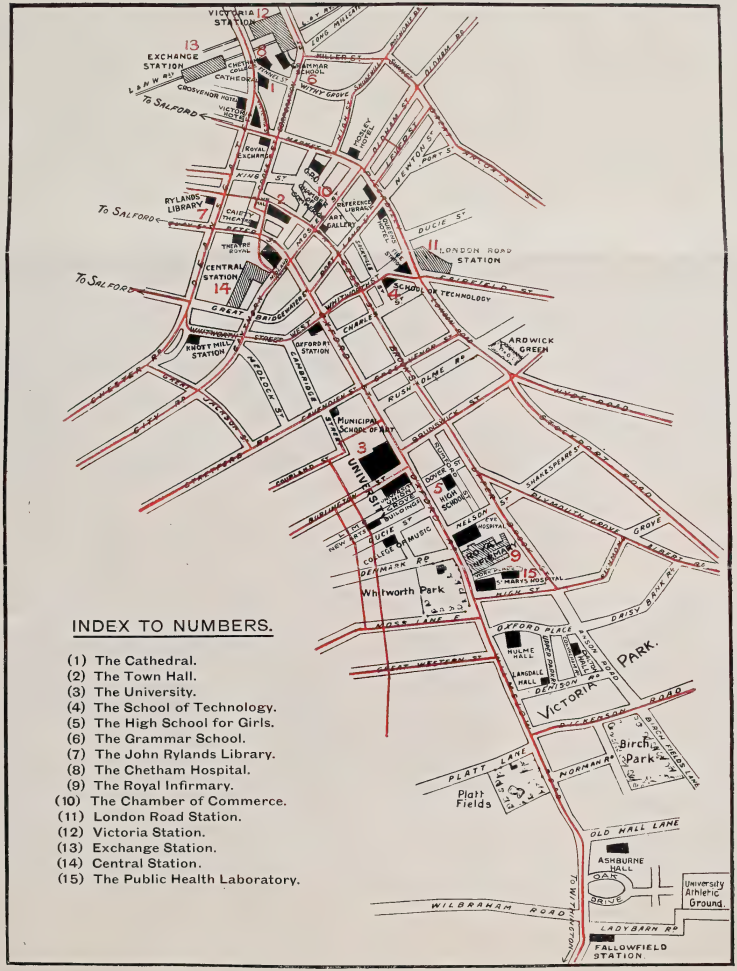


PLATE 13.

PLAN OF MANCHESTER. Tram Lines are shown in red.

was established in 1775, both winning support and rousing opposition as a supposed antidote to the rapidly growing Methodism of the town. Manchester rapidly became one of the great stock company centres. Many actors of local fame resided here, and supported the travelling "stars." In the year following the foundation of the Royal, eighteeth-century play-making for the stage had reached its acme in the *School for Scandal*, only to enter upon another hundred years of almost unbroken mediocrity. The day of great actors and actresses, on the other hand was still at high noon; and if Manchester was too late for Garrick, she enjoyed her full share of the art of the Kembles and the Keans, and the long line of their successors. Kemble acted here as early as 1777; Macready, Irving, and Sir Forbes Robertson, tried their prentice hands here before they were heard of in London. A notable local character of the forties was the theatrical barber William Yearsley, who was wont to frequent "the Square" superbly dressed, and to greet his acquaintances with a "Horatio, or I do forget myself." In the latter half of the nineteenth century the Prince's Theatre was the scene of a series of public-spirited dramatic enterprises; in particular of the very remarkable Shakespearean revivals organised successively by John Knowles and Charles Calvert, and hardly to be matched, at that time, elsewhere in England. Several other theatres—especially the Gaiety and the Queen's—had in the meantime begun to provide entertainment of varying quality for the growing theatrical public of the town; in particular, a further series of excellent Shakespearean revivals was given by Messrs. Flanagan and Louis Calvert at the Queen's. The Independent Theatre put several plays of Ibsen on the Manchester stage for the first time out of London. Regular theatres now number nine, besides several in Salford.

The emergence of more ambitious and living types of drama in the nineties, under the stimulus, first of Ibsen, then of the Irish poets and the players of Dublin, was followed with as keen an interest in the great centres as in London, and Manchester was destined to take a foremost part in their encouragement by the foundation here of the first

British Repertory Theatre. Miss A. E. F. Horniman, who since 1894 had devoted her labour and her wealth to providing stages for the new schools, first (disastrously) in London, and then in Dublin, decided in the early years of the new century to set up a Repertory theatre in England, and chose Manchester for the experiment, buying and equipping the Gaiety Theatre for the purpose. A high standard of intellectual dramatic and literary interest has since been steadily maintained there. Besides frequent performances of the work of Ibsen, Synge, Yeats, Shaw, Verhaeren, Hauptmann, Sudermann, the English classical drama, and Euripides, many new pieces have been played on this stage for the first time. Some of them afterwards made a sensation in London. This was also notably the case with many young actors who had gained their first triumphs on the Gaiety stage. And in the late Stanley Houghton, auther of *Hindle Wakes*, the Gaiety may claim to have discovered a Manchester dramatist of genuine power. Of late years the University has provided a stage, usually performers, and sometimes in choral music, or prologues, for dramas beyond the scope of the ordinary theatre: in particular, for *Comus*, *Samson Agonistes*, the *Choephorœ* of Aschylus, the *Frogs* of Aristophanes, Mr. Masefield's *Pompey the Great*, and Ibsen's *Brand*.

(iii.) Music

Music has been said to divide with Mammon the devotion of the people of Manchester. Possibly this sets their musical enthusiasm too high; but music has some chance of being that one of the fine arts to which her climate is least unkind. The great age of English music had long gone by before any note at all distinctive was heard in Manchester, and that came, as we saw, from the organist of the Collegiate Church who in 1767 provided a tune for "Christians Awake;" unless we are to reckon his predecessor, E. Betts, who, forty-three years earlier, had produced an *Introduction to the Skill of Music*. The history of the "Gentlemen's Concerts" goes back, however, far into the century; and tradition even has it that the Young Pretender attended one of them on his south-

ward march in 1745. For the rest, musical progress here has meant, in the main, only the growth of musical knowledge, taste, resources, opportunities, and executive power. To the thin ranks of British composers Manchester has furnished no notable recruit. But from the twenties of the nineteenth century onward, her large and responsive public began to attract famous singers and instrumentalists. One of the most memorable of all these visits was memorable also for its tragic close. At the musical festival held in September, 1836, the great French singer, Marie Félicité Malibran, then at the height of her European fame though still in the prime of early womanhood, met with an accident, which proved fatal (September 23rd). She was buried in the Collegiate Church, her remains being subsequently transferred to Paris. A fortnight later, Alfred de Musset wrote his impassioned stanzas, "A la Malibran,"—

Sans doute il est trop tard pour parler
encor d'elle . . .

Her beautiful and expressive profile is preserved in a medallion, the work of the sculptor William Bally; it was presented to the Watson Music Library and is now the property of the city. Ten years later, Felix Mendelssohn conducted in the Free Trade Hall the first performance here of his *Elijah*, then just completed.

The most important event in Manchester's musical history in the nineteenth century was nevertheless the formation by a German musician, Charles Hallé, who had been driven from Paris by the Revolution of 1848, of an orchestra, chosen with a critical severity then rare if not unknown in England; and the institution of an annual series of orchestral concerts in the Free Trade Hall. The Hallé Concerts from the first enjoyed enthusiastic and powerful support, particularly from the wealthy and cultivated German colony. They soon became, and still continue to be, a great Manchester institution; an instrument of musical education for all the music lovers of the entire district, and more than any other place their social centre and rendezvous. The formation of the Hallé Concerts Society, with a guaranteed fund of £18,000, finally

placed them on a secure financial basis. Some years before his death in 1895, Hallé's signal services to musical culture in England were recognised by a knighthood. Under the conductorship of Dr. Hans Richter of Vienna, the reputation of these concerts reached its height, and its orchestra was in wide request in other musical centres. Sir Charles Hallé contributed also directly to musical training by establishing here the Royal College of Music; it has been ably carried on since his death by a series of distinguished musicians. Many other musical societies of note exist: in particular, the Gentlemen's Glee Club, the Manchester Vocal Society, and not least, the Brodsky Quartette. Opera has still no permanent home in the city, but many performances are given every season. The most memorable event in the recent musical history of Manchester was the performance, in the autumn of 1913, of Wagner's *Ring* and the *Meistersinger*.

C. H. H.

The Art Galleries of Manchester

THE chief collection of pictures in Manchester is that of the City Art Gallery, in Mosley Street. This building, which was erected in 1825, was originally designed by Sir Charles Barry for "The Royal Manchester Institution for the promotion of Literature, Science, and the Arts." The Governors of the Royal Institution served the cause of education by means of lectures and exhibitions, and also by the acquisition of pictures and other works of art which gradually formed the nucleus of a Permanent Collection. This collection had grown considerably by 1882 when, largely through the efforts of the late George Falkner, the Governors, with the object of enabling their work to expand more rapidly in this direction, arranged to hand over Barry's building with its contents to the City of Manchester, on the understanding that for the next twenty years the sum of two thousand pounds should be set aside annually by the

Corporation out of the rates for the purchase of works of art. This grant has been continued up to the present year and has been supplemented by numerous gifts and bequests, with the result that the collection is now one of the most important in the country. Money has also been voted by the Corporation in the past for the purpose of exhibitions, not merely of works for sale, but also of works on loan illustrating many branches and periods of art. At the present moment there are being exhibited the historical collection of Flemish lace, belonging to Madame MacLeod of Ghent (or at least as much of it as could be rescued last summer) and Meunier's bronze group "Le Grisou," which belongs to the Belgian Government.

Until the urgent question of how to provide further accommodation, and so to do full justice to the city's art treasures has been solved, it will be impossible to give an adequate idea of the whole collection which now has to be distributed between various centres.

A considerable number of pictures are hung in the Museum at Queen's Park, where the Old Manchester Society's collection illustrating "Old Manchester and Salford" is also on exhibition; other pictures together with the Egerton Collection of Oriental Arms and Armour have been on view in the Reception Rooms of Heaton Hall (one of Wyatt's beautiful and characteristic houses); and many cases containing textiles and lace, and samples of Greek pottery have been lent to the Municipal School of Art and the School of Technology. Two other interesting collections—of pre-Wedgwood pottery on loan from Mr. T. T. Greg, and of Wedgwood ware on loan from Miss Philips—are housed in the Gallery in Mosley Street where there are also a few selected prints and drawings, and examples in bronze of the work of Rodin, Gilbert and Legros, amongst others.

The bulk of the oil pictures in the possession of the Corporation belong to the English School of painting and mainly cover the century that has elapsed since the date of the erection of the Gallery. The first part of this period is illustrated by Etty, Liverseege, Müller, Poole, Gilbert, Pickersgill, and the earlier members of the Manchester Academy of Fine Arts such as Hammersley, Mark Anthony, Percy

Crozier, and Clarence Whaite. The painters of the mid-Victorian period are well represented, more especially the group which formed the Pre-Raphaelite Brotherhood. The examples in the Gallery of Ford Madox Brown taken in conjunction with the frescoes in the Town Hall give a comprehensive view of that painter's career; the various phases of Millais' style are well illustrated by the eight examples of his work; there are four famous Hunts, two well-known Leightons, a good Burne-Jones, and some admirable Rossettis. Watts too is strongly represented both by portraits and subject pictures, and generally speaking the portraits are a strong feature of the collection. There are also characteristic works by Cecil Lawson, Pettie, Orchardson, Buxton Knight, and other Victorian painters whom it is impossible to enumerate here, and amongst the living painters who are represented are Sargent, Cameron, Orpen, Strang, Holmes, Shannon, Ricketts, and Connard. That the early English School has not been neglected may be seen from the group of landscapes by Wilson and by the examples of Reynolds, Gainsborough, Romney, Cox, Morland, Constable, and the members of the Norwich School; while the names of Lely, Van Dyck, Van der Vliet, Cuyp, Van Ostade, Fantin Latour, Monticelli, Loiseau, Boudin, Corot, and Troyon, will show that the English work has not been collected to the exclusion of foreign.

The best of the water-colours (left to the Gallery by the late Roger Ross) are now on loan at the Whitworth Institute Galleries in Oxford Road where they supplement a collection of water-colours of the English School which is one of the most valuable to be found outside the walls of the Victoria and Albert Museum. The Institute itself was the outcome of a large and munificent gift by the legatees of the late Sir Joseph Whitworth, the actual carrying out of the scheme being the work of a committee acting in conjunction with the legatees. Soon after its incorporation by Royal Charter in 1889, its funds were increased by a large sum from the guarantors of the Manchester Royal Jubilee Exhibition which was devoted to the purchase of works of art. To the exhibits thus acquired were added many generous gifts, two of the

most notable of which were the Kay-Cox collection of pottery and colour-prints and the large and choice collection of the late J. E. Taylor, designed to illustrate the history of water-colour drawing in England. The Institute is not without oil paintings, the most important being a version of Watts's "Love and Death," presented by the artist, who is also also represented by a series of chalk drawings after some of his best-known pictures; it also contains some textiles, a number of casts, and amongst other engravings a valuable set of Turner's "Liber Studiorum." But the feature which gives the Gallery its special interest and importance is the collection of water-colours which includes specimens of all the famous masters from Paul Sandby and the early topographical draughtsmen, through Girtin, Turner, Cotman, Cox, De Wint, and their contemporaries down to Lewis, Linnel, Palmer, Fred Walker, and artists who are still living. Girtin and Turner are especially well represented, the specimens of Cox's work if not so numerous are choice, and there are good examples of the lesser known painters which give value to the collection from the point of view of the student. Mention should also be made of a group of illustrations for Milton's "Hymn to the Nativity" by Blake, whose work is also to be seen in the Gallery in Mosley Street, in a set of imaginary portraits, surrounded by decorated borders, of famous writers of various times and nationalities.

L. H.

Manchester Boys' Clubs

THE Boys' Club movement in England may be said to have developed from the efforts of Mr. Quintin Hogg, begun in 1865, and in Manchester from the work done by Mr. Alexander Devine who, in 1886, founded the Club in Hulme. This was followed by the founding of the Adelphi Club in Salford, in 1888, and the Ardwick Lads' Club, in 1889. Others quickly followed, until we find to-day, that there are in Manchester and Salford a very large

number of well organised Boys', or Lads' Clubs, as they are more generally styled.

Rather less than thirty years ago, a number of men began to realise, more or less independently of each other, the great need of some agency to help the boys of the City to combat the evils resulting from our industrial system.

At that time, there were certain parts of Manchester and Salford where it was dangerous to walk at night. Those were the days of the "scuttler" with his metal tipped clog, brass studded belt and bell bottomed trousers, who cheerfully "went for" either a member of an opposing gang or any harmless pedestrian who happened to be passing. The lack of opportunity for recreation was the cause of all this misdirected energy, for in those days there were no playing fields and only the public libraries for the long winter evenings.

Most of the Clubs started in a very simple fashion; their founders did not, as a rule, stop to theorise, but got the lads together in some modest building and tried to understand their difficulties and enter into their lives. Nowadays, means of distraction are more than amply provided by a multiplicity of Music Halls, Theatres, Picture Halls and Billiard Halls, and so Lads' Clubs tend more and more to specialise on the educational side of their programme, and no Club can be considered properly organised that has not a system of continuation evening classes, preferably under the Manchester Education Committee.

Perhaps the outstanding feature in all Lads' Clubs is the annual camp during Whit-week, either at the seaside or in the country.

The camps vary in size from about thirty to five hundred lads and also in details of organisation, but they all aim in giving their members the opportunity of getting into touch with nature and of tasting the delights of a natural open-air life. Plenty of good air, good food and sea bathing, if only for one week in the year, does wonders for city lads and vastly different do they appear on their return home. But most important of all is the opportunity that Camp life affords for officers to get more fully into the inner lives of the lads and to win their trust and friend-

PLAN OF THE UNIVERSITY OF MANCHESTER

showing Section Meeting Places, British Association Meeting, 1915.

A. Mathematical and Physical Science.
B. Chemistry.
C. Geology.
D. Zoology.
E. Geography.
F. Economic Science and Statistics.
(Chamber of Commerce, 44, Mosley Street, see plate 13, facing page 101.)
G. Engineering.
H. Anthropology.
I. Physiology.
K. Botany.
L. Educational Science } The High School, Dover Street.
M. Agriculture }

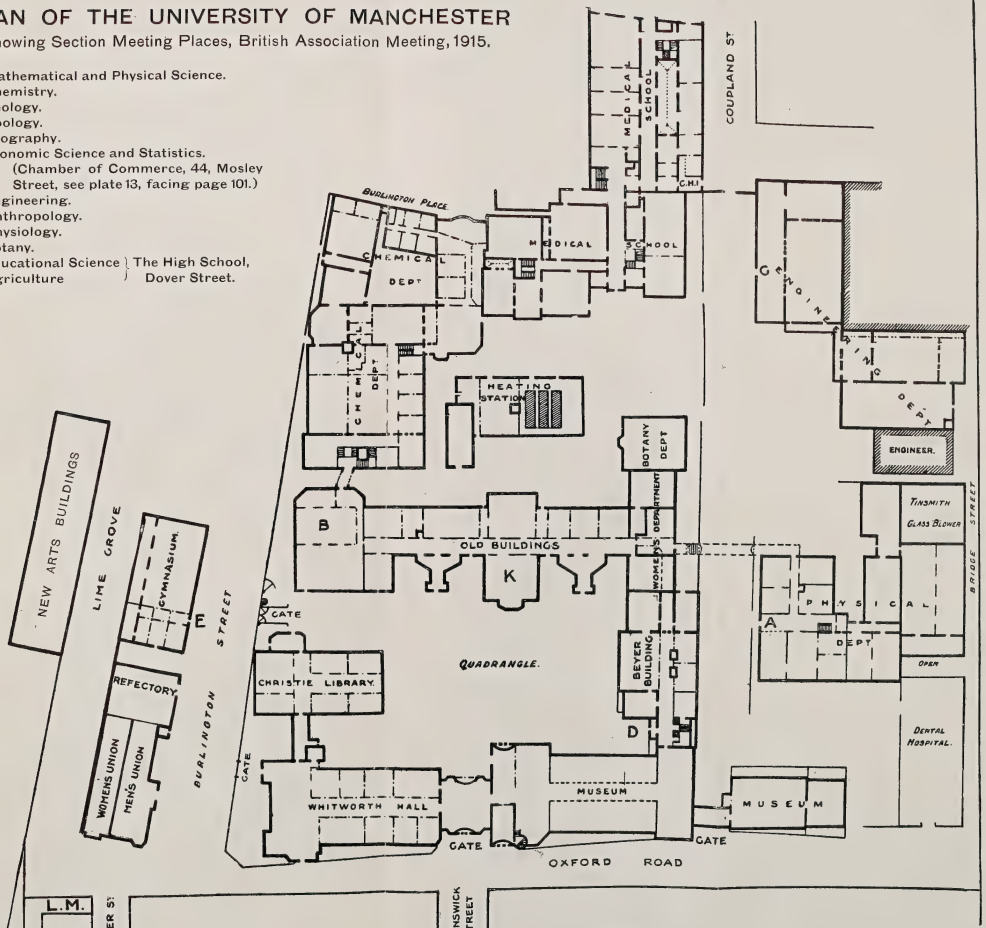


PLATE 14.

ship. Many Clubs make Camp depend on good class attendance during the winter months, and all lads pay a considerable portion of the cost.

A few Clubs have a paid secretary, but the remainder depend entirely on voluntary workers who go down regularly on their respective nights. Simple services are held on Sundays for members, whilst others content themselves with leaving religious instruction to the Churches and Chapels. All the principal clubs are quite undenominational in character.

Working in a Lads' Club blesses him that gives as well as him that takes, and many life-long friendships have been made in connection with the work. There is naturally a considerable diversity in the size of the different clubs, but generally speaking, those in Manchester are larger than similar organisations in London or other parts of the country, some of the local Clubs having a membership of eight hundred.

As in all other affairs, the success of a Club depends on the good sense, skill and general "savoir faire" of the managing officer. Apart from the personal touch, every lad is bound to benefit enormously through forming part of a well disciplined community, which is bound to develop his feelings of esprit de corps if it does nothing else.

Lads' Clubs through their inter matches and competitions furnish to some extent the Public School training which more fortunately circumstanced boys enjoy, and which it is almost impossible for the Elementary Schools to provide. Games naturally enter largely into the programmes, and the members of the different Clubs meet each other in friendly rivalry at football, cricket, fives, harriers, swimming, gymnastics, chess, draughts, etc.

A problem every unit has to face is the retention of its older members. Most Clubs provide a special room to which are attached certain privileges, and by giving the older boys a certain amount of authority under the title of "prefect," they can be of the greatest service to the managers.

A federation of Manchester and Salford Clubs was formed in 1907, which aims at obtaining uniformity of working between the different units.

As regards the financial aspect, all charge a weekly

payment from their members of one penny or half penny according to age, but some of the largest Clubs cost upwards of £800 annually, and it can be seen that a considerable portion of the up-keep expenses is provided by friends.

Finally, the problem we have to face to-day is not so much to provide distraction for our members, as to teach them to concentrate on something definite, and to carry out the motto adopted by one of the oldest and most successful Clubs:—"Quit you like men, be strong."

W. M.

Manchester and Salford Playing Fields Society

THE Playing Fields movement in Manchester has developed out of the Lads' Clubs of which it is the natural complement. It became increasingly difficult for the Clubs to find fields for the playing of games, and when once found, there was absolutely no security of tenure, as with the advent of the speculative builder, it was necessary to move further and further out of the City.

The Playing Fields Society was inaugurated in the year 1907, and its objects are threefold:—

To increase the existing supply of public and private playing fields and other open spaces, and particularly to purchase, take on lease, or otherwise to acquire land suitable for this purpose.

To arrange for the use of such playing fields by clubs and others, either gratuitously or otherwise, as may from time to time be deemed advisable.

To endeavour to influence public and private bodies, with a view to the provision of sufficient playing fields to meet the requirements of the various districts.

By means of generous donations of money and land, and by the arrangement of mortgages, the Society has become the possessor of upwards of one hundred acres of freehold land, providing five

playing fields situated in Gorton, Crumpsall, Newton Heath, Pendleton, and Didsbury.

There are in all one hundred football and cricket pitches on the Society's fields which are also equipped with dressing tents for the players.

The Society lets out the pitches to working lads' teams, and it is needless to say that it has no difficulty in filling all its grounds. The Society receives a total yearly rental of nearly £550 from working lads' teams.

Probably there are 2,000 boys and young men, counting players and their friends, present on the five fields every Saturday afternoon during the year. Many of the teams are not connected in any way with Lads' Clubs or any recognised institution, and in their case, it would have been doubly difficult to find playing accommodation but for the provision made by the Society.

The Society has exercised considerable influence on the policy of the Manchester City Council in the purchase of land for games and in the organisation of games in the City parks.

Through its influence, the Manchester Parks' Committee has inaugurated a system of play centres for children in the Recreation grounds, and the Education Committee has adopted a scheme of organised games for school children in the public parks.

The Society in its early stages received valuable aid from the Committee of the London Playing Fields Society, and in its turn it has helped on the movement in Bolton, Stockport, Birkenhead, and Rochdale.

W. M.

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Author McKechnie, H.M. (ed.)

Title Manchester in 1915; being the Handbook of the 85th. Meeting of the British Association for the Advancement of Science held in Manchester.

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